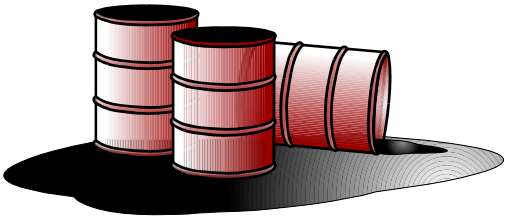
CHAPTER 6: Environmental Emergencies

Purpose and Applicability of Regulations



There are many regulations pertaining to release planning, reporting, employee training, and response. The intent is to protect public health and welfare and the environment from spills or releases of regulated materials. Each regulation targets a specific group of materials that exhibit certain characteristics. Appendix B contains definitions of the various regulated groups of materials referenced in this chapter. These defined terms appear throughout this chapter in bold lettering. In some instances, multiple agencies use the same term to describe a different regulated group. Such terms will be followed by a dash and the acronym of the defining agency or regulation. For example, the U.S. Department of Transportation (USDOT) and the Michigan Fire Prevention Code, Public Act 207 of 1941, as amended (Act 207) have differing definitions for the term "hazardous material." Therefore, the USDOT and Act 207 definitions of hazardous material will appear as "**hazardous material-USDOT**" and "**hazardous material-Act 207**" respectively.

In addition to the planning regulations summarized in this chapter, fruit and vegetable processors must provide adequate security in order to provide safe products. That must include adequate water security as a part of processing. Specifically, in accordance with the Safe Drinking Water Act Bioterrorism Act of 2002, water system security programs should consider:

(1) The purchase and installation of equipment for detection of intruders;

(2) The purchase and installation of fencing, gating, lighting, or security cameras;

(3) The tamper-proofing of manhole covers, fire hydrants, and valve boxes;

(4) The re-keying of doors and locks;

(5) Improvements to electronic, computer, or other automated systems and remote security systems;

(6) Participation in training programs and the purchase of training manuals and guidance materials, relating to security against terrorist attacks;

(7) Improvements in the use, storage, or handling of various chemicals; and

(8) Security screening of employees or contractor support services.

Information at www.michigan.gov/deqwater "Water and Wastewater Security" may be useful when evaluating your security measures.

In This Chapter…

Agencies and Their Laws and Rules

Due to the numerous environmental federal and state regulations that apply to this chapter, please refer to the Release Notification

Requirements Table on pages 6-22 through 6-29 and the Summary of Common Environmental Release Prevention and Response Plans in Appendix 6-A. This table is a tool to identify the laws and regulations applicable to this chapter and the agencies that implement them.

6.1 Release Prevention Tips

Releases can usually be prevented by using common sense and care when storing and transferring regulated materials. Tips include:

- Train all personnel in spill prevention techniques. Some regulations indicate who, at a minimum, must be trained for handling regulated material and waste.
- Practice safe loading and unloading procedures.
- Have inventory control procedures track material from receipt to disposal.
- Post warning and instructional signs in appropriate places.
- Adequately label all containers.
- Use pumps or funnels to transfer liquids.
- Keep lids and covers on containers to control spills and evaporation.
- Use seal-less pumps.
- Install spill basins or dikes in storage areas.
- Install splash guards and drip boards on tanks and faucets.
- Use drip buckets under liquid spigots.
- Prohibit outside draining or replacement of fluids over the ground or on pavement not designed for containment.

You might also reduce the damage caused by spills if you notice them quickly. Routinely check your business for leaks and spills of materials. Some of the regulations specify how often you must monitor your business. Watch for strange odors and discoloration or corrosion of walls, work surfaces, ceilings, and pipes. Also note if anyone has irritation of the eyes, nose, or throat. All of these can indicate the presence of leaks or poorly maintained equipment.

6.2 Release Prevention and Response Planning

While environmental regulations do not require all businesses to develop release prevention and response plans, having one is recommended to minimize your liability and protect human health and the environment. Depending on your activities, you may be subject to multiple planning regulations and you're encouraged to develop one plan, an Integrated Contingency Plan (ICP) as described in Section 6.2.8, that includes each individual plan's specific requirements as identified in the different federal or state laws.

Even if you are not required to have a written plan under the regulations described in this section, you are responsible for any release on or from your property. You may be required to report the release to different agencies (see Section 6.3) and will be required to clean up the release (see Section 6.4). Release notifications and cleanup procedures would be included in

plans developed voluntarily or as required by regulation. In addition, staff must be properly trained for their role in responding to releases. Information about secondary containment and other material storage requirements discussed in Chapter 4 is also included in emergency plans.

Besides plans discussed in this chapter, facilities may have other planning related requirements in:

- Permits issued to the facility.
- Worker safety and health related requirements overseen by Department of Labor and Economic Growth, MIOSHA including HAZWOPER. Contact their Consultation, Education, and Training Division at 517-322-1809.
- Community Emergency Response Plan required by Section 302 of SARA Title III (see Chapter 5).

Firefighter Right-to-Know requires that you provide to your local fire department information about the hazardous materials kept on site. It is recommended that you invite your local fire department to tour your facility so they can be adequately trained and have the necessary equipment available to respond to an emergency at your facility. Some fire departments encourage the practice of having a lock box or emergency tube available somewhere outside of the facility building(s) that protects the contents of facility emergency contacts, basic facility information, facility maps, and either MSDSs or a description of potentially harmful materials on site. Talk to your fire department about this practice. They can provide recommendations as to what they want to have immediately available if called to the site and where they would like to have the information located. However, due to terrorism concerns be cautious about the placement of information in case of potential sabotage.

Consider what needs to be done in case of an emergency and prepare a response plan to protect your company, employees, and the environment. Consider the following in case emergency responders are called to the facility:

- The fire department's response is based on the information you give them. Provide as much detail as possible when calling for help. Have your emergency information readily available and let them know what hazardous materials are involved, how much if known, the location of the spill, if people are inside the facility or taking some response actions, wind direction, etc.
- Have a key contact person (who is knowledgeable about the whole facility and the incident) meet the responders.
- Make sure everyone is accounted for. That includes both employees and visitors at the facility.
- Keep everyone upwind of the situation and if necessary have people move to a different location.
- Have a knowledgeable public relations person from the facility available to address media if they arrive at the scene.
- Follow the emergency responders' directions.

The following are common environmental release prevention and response plans that a

manufacturer may be required to develop:

- Hazardous Waste Contingency Plan: Part 111 (Hazardous Waste Management) of Act 451 if you have regulated amounts of **hazardous waste-DEQ** (see Section 6.2.1).
- Pollution Incident Prevention Plan (PIPP): Part 31 (Water Resources Protection) of Act 451 if you have regulated amounts of **salt** and regulated materials (those **polluting materials** that are listed in R 324.2009, Table 1). (see Section 6.2.2)
- Spill Prevention, Control, and Countermeasures (SPCC) Plan: federal Clean Water Act if you have regulated storage capacity of **oils-EPA** and a release could potentially reach navigable waters, or you have PCB articles regulated under the Toxic Substances Control Act (TSCA) that requires a SPCC Plan. (see Section 6.2.3)
- Storm Water Pollution Prevention Plan (SWPPP): Part 31 (Water Resources Protection) of Act 451 if you are subject to a storm water discharge permit. (see Section 3.2.3.d and 6.2.4)
- Risk Management Program (RMP): Section 112(r) of the 1990 Clean Air Act Amendments if you have regulated amounts of **CAA Section 112(r) Substances**. (see Section 6.2.5)
- Emergency Action Plan: National Fire Protection Association (NFPA) pamphlet 30 if you have flammable and combustible liquids stored aboveground in containers and drums 60 gallons and larger and tanks 660 gallons and larger (see Section 6.2.6)
- HAZMAT Security Plan if you are shipping hazardous materials, including shipments of hazardous waste requiring placards in excess of 1000 pounds (see Section 6.2.7)
- Integrated Contingency Plan (ICP) if you choose to prepare one plan that covers multiple regulatory requirements instead of developing an individual plan under each regulation. (see Section 6.2.8)

Are you subject to the above planning requirements? First it is necessary to determine if there are regulated materials on site, and then determine if the facility meets other conditions which require planning. Ask yourself the following questions:

1. Are there regulated materials on site? Use your material safety data sheets (MSDS), hazardous waste manifests, and/or waste survey as described in Section 2.1 to identify.
   - Is the material on any list of regulated substances?
   - Is the material a product, raw material, or a **hazardous waste-DEQ** or industrial waste containing **polluting materials** in concentrations $\geq$ 1 percent?
   - Is any of it **salt** (sodium chloride, potassium chloride, calcium chloride, and magnesium chloride)?
   - Is any material a flammable or combustible liquid (flashpoint below 200 degrees Fahrenheit)?
   - Is any material an oil (Includes vegetable oils, animal fats, synthetic oils, and petroleum products, and derivatives like mineral spirits, gasoline, diesel fuel, etc.)? Do you have a single 660 gallon capacity tank or 1,320 or more gallons total storage capacity?
   - Are there regulated PCB articles on site in temporary storage or stationary bulk storage

tanks (see Section 4.5)?

2. If there are regulated materials or other regulated conditions, do you meet those conditions that would require planning? Information to consider include:
   - How much is on site?
   - How much is stored outdoors or indoors?
   - How long is it kept on site?
   - Is any material stored in regulated aboveground or underground storage tanks?
   - Can a release reach navigable waters of the state either by direct discharge or via a conveyance system such as drains, ditches, etc? Do you currently have an unauthorized discharge (see Chapter 3 for authorized discharge information)?
   - What is the facility's hazardous waste generator status (see Section 2.4.3)?
   - Does the facility have a hazardous waste treatment, storage, and disposal facility permit?
   - Is the facility required to have a storm water discharge permit (see Section 3.2.3.d)? What is the facility's Standard Industrial Classification (SIC) code (see Section 3.2.3.d)?
   - If a release occurred, is there a potential for a significant impact on the waters of the state (i.e., rivers, lakes, drains)?
   - Is hazardous material being shipped off-site (see Section 4.4)?

Now use your answers while reviewing the planning requirements found in Appendix 6-A and the referenced regulations to see which apply to your company. These plans and resources available to meet the requirements are discussed in more detail in the following sections.

Where can I find other emergency planning resources?

- Does the facility have any existing plans? If yes, determine if the facility is still subject to the same regulations that require those plans. Then look at current requirements to determine what needs to be updated.
- Go to the DEQ Emergency Planning web site at **www.michigan.gov/deqemergencyplan** for planning information and web links.
- The Michigan State Police (MSP), Emergency Management and Homeland Security Division, offers HAZMAT training and has publications to help companies and communities prepare for a hazardous materials incident, including the
  - **"Site Emergency Planning Workbook"**
  - *"***Critical Incident Protocol — A Public and Private Partnership***"* for community and facility joint planning information.
  - *These MSP documents along with other guidance can be accessed on the DEQ's Emergency Planning web site.*
- The Federal Emergency Management Agency has information at **www.fema.gov** for prevention and preparation.
- The Center for Disease Control at **www.cdc.gov** (select Emergency Preparedness and Response) has public health emergency preparedness guidance for specific chemical

information, including Chemical Safety Cards, along with information about anthrax or other bioterrorism threats.

- The US Coast Guard National Response Center at **www.nrc.uscg.mil/index.html** provides information about transportation accidents, oil spills, chemical releases, and more.
- The National Oceanic and Atmospheric Administration's Office of Response and Restoration provides numerous links to chemical databases, MSDS databases, and chemical fact sheets developed by ATSDR highlighting toxicity, exposure information, and more at **response.restoration.noaa.gov**.
- The National Fire Protection Association (**www.nfpa.org**) has published the *Standard for Site Security Services for Fire Loss Prevention*, (**NFPA – 601**)
- The Agency for Toxic Substances and Disease Registry (**www.atsdr.cdc.gov**) provides a 10-step procedure to analyze, mitigate, and prevent public health hazards resulting from terrorism involving industrial chemicals.
- The American Society for Industrial Security (**www.securitymanagement.com**) develops educational programs and materials that address security concerns, including an online version of its magazine.
- The Center for Chemical Process Safety (**www.aiche.org/ccps**) develops engineering and management practices to prevent and mitigate consequences of catastrophic events involving chemical releases.
- The National Safety Council (**www.nsc.org**) provides general safety information on chemical and environmental issues.

6.2.1 Contingency Plans for Hazardous Waste Generators

The Waste and Hazardous Materials Division oversees the hazardous waste regulations that require Large Quantity and Small Quantity Generators to be prepared in case of a fire, explosion, or release of **hazardous waste-DEQ**, and to maintain and operate their businesses in a way that minimizes these risks. Conditionally Exempt Small Quantity Generators are highly encouraged to also be prepared and to consider meeting the Small Quantity Generator planning conditions even though it is not required by the waste regulations. See Section 2.4.3 for an explanation of the generator status levels.

Basically, generators of **hazardous waste-DEQ** are required to comply with the following:

1. Have proper emergency equipment available:
   - Communication devices (e.g., phones, radios, intercom, etc.).
   - Portable fire extinguishers.
   - Spill control equipment (e.g., absorbents, containers, kits).
   - Water for fire control in sufficient volumes.
   - Test and maintain equipment as necessary.
   - Have immediate access to an internal alarm system. This means personnel can activate an alarm within seconds, not minutes.
   - Provide and maintain sufficient aisle space in the **hazardous waste-DEQ** handling areas to ensure access of emergency equipment and emergency personnel.

2. Meet applicable planning requirements as outlined below.

Small Quantity Generators Must:

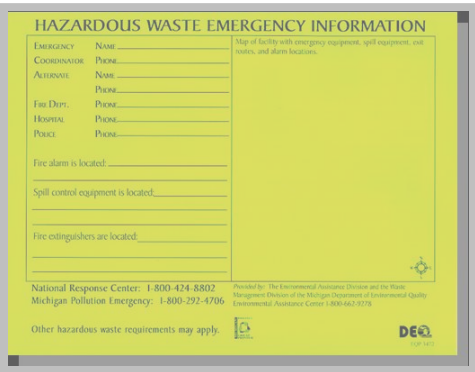
a. Identify one employee who is on site or on call and has the responsibility to coordinate all emergency response activities. It is recommended that you identify alternative coordinators to cover when the primary person is on vacation or otherwise not available.

b. Post the following next to their telephones:

- Name and telephone number(s) of the emergency coordinator and alternates.
- Locations of fire extinguishers, alarms, and spill control material.
- Location of fire alarms if direct to fire department, or the telephone number of the local fire department.

The DEQ, Waste and Hazardous Materials Division (WHMD), has an optional **"Hazardous Waste Emergency Information" (EQP3472)** form you can use to post the required information next to telephones. You are not required to use this particular form; however, failure to have the information posted is a common violation found during **hazardous waste-DEQ** inspections. There are other requirements outlined on the back of the self sticking form and in WHMD's **"Small Quantity Generator Requirements"** fact sheet.

Call 800-662-9278 for copies.


HAZARDOUS WASTE EMERGENCY INFORMATION

EMERGENCY COORDINATOR NAME PHONE
ALTERNATE NAME PHONE
FIRE DEPT. PHONE
HOSPITAL PHONE
POLICE PHONE

Fire alarm is located:

Spill control equipment is located:

Fire extinguishers are located:

National Response Center: 1-800-424-8802
Michigan Pollution Emergency: 1-800-292-4706

Other hazardous waste requirements may apply.

DEQ

c. Send a diagram or discuss the layout of their facility, access roads, and evacuation routes with the response agencies. Have arrangements in place with authorities that respond to the types of emergencies regarding the waste handled at your business. Invite police, fire departments, and emergency response teams to tour your business. If local or state authorities decline your arrangement, you must have written documentation of that refusal. If you use outside contractors to respond to emergencies, you must make arrangements with emergency response contractors and suppliers. Keep documentation of any visits by emergency response people, agreements, etc.

d. Submit to local hospitals a listing of possible injuries or illnesses that might result from the **hazardous waste-DEQ** at their businesses.

Large Quantity Generators Must:

a. Have a written contingency plan. This plan describes what staff will do in case of a fire, explosion, or release of **hazardous waste-DEQ**. The contingency plan must include:

- Name, telephone number, and address (both home and work) for your primary and secondary emergency coordinators. These coordinators must either be on the premises or on call and able to reach the facility within a short amount of time.

- Written procedures to follow in the event of a **hazardous waste-DEQ** release. These procedures must relate to the type of wastes kept on site. It needs to include spill and fire response and monitoring actions and reporting sequence to emergency response organizations.
- A list of emergency equipment at the facility, where it is located, physical description, and brief outline of its capabilities. It is recommended that you develop a floor plan and make it available to staff. The map should show location of fire extinguishing equipment (e.g., fire extinguishers, sprinklers, hoses, fire hydrants); communication or alarm systems (e.g., alarm boxes or phones, etc.); and spill control equipment (e.g., absorbents, spill kits, shovels) using easy-to-understand symbols.
- A written evacuation plan that includes a diagram of the layout of your business, access roads, and primary and alternative evacuation routes. The plan must also describe the signals to be used to begin evacuation. These routes can be shown on the same floor plan as the emergency response equipment. It is recommended that routes include two outside areas where employees should assemble (using the one upwind of the facility).

b. Keep a copy of the plan at the facility.

c. Provide a copy of the contingency plan to local police and fire departments, hospitals, emergency response teams, and any emergency response contractors and suppliers you may have hired. Have proof that the plan was distributed (e.g. keep copy of a written cover letter). In the letter briefly explain why a copy of the plan is being sent, identify a contact person who answers questions, and outline any emergency response you expect from the recipient of the letter. **DO NOT SUBMIT A COPY OF THE HAZARDOUS WASTE CONTINGENCY PLAN TO DEQ OR TO THE STATE EMERGENCY RESPONSE COMMISSION (SERC) UNLESS REQUESTED**. At the time this publication went to print, Michigan did not have a state emergency response team. If local or state authorities decline your arrangement, you must have written documentation of that refusal. If you use outside contractors to respond to emergencies, you must make arrangements with emergency response contractors and suppliers.

d. Submit to local hospitals a listing of possible injuries or illnesses that might result from the **hazardous waste-DEQ** at their businesses.

e. Distribute the contingency plan to your employees as part of their hazardous waste training and keep documentation of an annual review.

f. Update the plan whenever emergency coordinators or equipment change, or when the plan fails during an emergency. In addition, updates must be made if the facility makes any changes to its design, construction, operations, etc., that increase the potential for fires, explosions, or releases of **hazardous waste-DEQ**, or that change the necessary response actions.

If you are required to prepare another release prevention and response plan, you only need to add the **hazardous waste-DEQ** management provisions necessary to make your existing plan comply with these additional requirements. You do not need separate plans to meet the requirements described in the hazardous waste regulations. See Section 6.2.8 for Integrated Contingency Plan information.

Not all of the specific requirements have been outlined above; therefore, you should contact

your local **WHMD district office** (see Appendix C for phone numbers) or refer to the regulations for more details. See the WHMD's **"Contingency Plan and Emergency Procedures"** fact sheet designed to help Large Quantity Generators meet these requirements, and the WHMD's **"Personnel Training Requirements for Fully Regulated Generators of Hazardous Waste."**

6.2.2 Pollution Incident Prevention Plan (PIPP)

The Water Bureau oversees the regulations requiring a PIPP [Part 31, Water Resource Protection, of Act 451 administrative Part 5 rules (Spillage of Oil and Polluting Materials)] and not the Waste Management Division as referenced in the rules. A facility is required to have a Pollution Incident Prevention Plan (PIPP) and meet applicable storage and use requirements if it:

- Meets the definition of an on-land facility, AND
- Does not meet any of the listed conditional exemptions, AND
- Has salts and regulated materials *(*polluting materials listed in ***R 324.2009)*** that meet or exceed the listed threshold management quantities, OR
- The DEQ determines a release from the facility could cause substantial harm to the surface or groundwaters of the state.

Polluting materials includes the substances and mixtures of the materials outlined below if the mixtures contain one percent or more by weight of these substances. The Part 5 rule threshold management quantities (TMQs) for planning include:

Polluting materials *include mixtures of these materials if they contain one percent or more, by weight of these substances.*

Aggregate amounts of **salt** on the contiguous property. Salts include calcium chloride, sodium chloride (rock salt), potassium chloride, and magnesium chloride.

- Solid form - 5 tons
- Liquid form - 1,000 gallons

Aggregate amounts of regulated materials (**polluting materials** listed in R 324.2009) in discrete use or storage areas:

- Outdoors 440 pounds
- Indoors 2,200 pounds

When trying to determine if you have listed polluting materials, look at the MSDS for the materials on-site and compare that to the regulated substances listed in rule R 324.2009. It is recommended to first compare CAS numbers since chemicals can be known by different names, and then compare using names for chemical groupings that do not have an assigned CAS number. If the MSDS does not include the ingredients, contact the manufacturer and ask them for assistance in determining if it contains any regulated substance.

Common examples where you may find listed regulated materials in a food processing facility include:

- Caustics used for peeling (sodium hydroxide, potassium hydroxide)
- Cleaners and sanitizers (ammonia, potassium hydroxide, sodium hypochlorite (bleach), sodium hydroxide, nitric acid, chlorine, phosphoric acid, 1,1,1-trichloroethane, and formaldehyde)
- Refrigerants (ethylene glycol, ammonia, dichlorodifluoromethane [CFC-12])
- Water and wastewater treatment additives (nitric acid, hydrochloric acid, sulfuric acid)
- Food ingredients (phosphoric acid)
- Fork lifts and transportation equipment (sulfuric acid in lead acid batteries)
- Equipment and building maintenance (various degreasing solvents, insecticides/pesticides, heating oils, fuels)
- Laboratory chemicals (methanol and ferrous sulfate). The quantities found in on-site labs usually meet the exemption of a small container less than 10 gallons in size or 100 pounds stored indoors in a manner that releases don't get into the environment.
- Electrical equipment (transformers, circuit breakers, switches, large capacitors, etc; or other equipment like air compressors containing PCBs. See Section 4.5.)
- Fumigants (bromomethane [methyl bromide], ethylene oxide, and propylene oxide)

Facilities with oils are not required to prepare a PIPP unless DEQ determines one is necessary per R 324.2003(2). See the Water Bureau POG #2 and the "*Reporting Releases Per Part 5 Rules*" summary at www.michigan.gov/deqwater "Emergency Response to Releases to Water". Oils would include the food grade hydraulic oils in the production machinery and also on the conveyors (for smooth operation and belt movement) along with oils used in building and vehicle maintenance and fuels. Facilities that have ***Oils-DEQ Part 5*** need to:

1. Determine if the oil is regulated by other rules and laws identified in R 324.2003 and meet those requirements.

   If subject to federal SPCC regulations as discussed in Section 6.2.3, meet those requirements and include release reporting as required in the Part 5 rules and Part 31 of Act 451.

2. Determine if any remaining oils not subject to other regulations meet the Part 5 rule TMQ:

   - Single container or tank having 660 gallon storage capacity; or
   - Total capacity of 1,320 gallons above ground storage

   These oils exceeding the Part 5 rule TMQs are subject to:

   - Surveillance requirements to detect releases from reaching waters of state [R 324.2004],
   - Use and indoor storage are designed, constructed, maintained and operated to prevent releases from reaching sewers, drains, or reaching waters of the state [R 324.2005(3)],
   - Release reporting as required in R 324.2002 and R 324.2007, and
   - Meet any other regulatory requirement for oil to which the facility is subject.

PIPP CONTENTS

The main components of the PIPP include the following:

- Facility information including emergency contacts.
- Inventory of polluting materials exceeding threshold management quantities.
- Site plan.
- Description of outdoor secondary containment for liquid polluting materials.
- Other spill control measures.
- General facility physical security methods.
- Spill control and cleanup procedures.
- **Emergency notification procedures** which include release reporting, spill response and cleanup. Release conditions and reporting threshold quantities are identified in Rule 324.2002(b) and (g) and in Rule 324.2009. If a release occurs and is reportable, the facility needs to meet the following requirements under both Part 31 of Act 451 amendments and changes in program oversight to the Water Bureau:

  1. Call to report releases exceeding threshold reporting quantities:
     - PEAS at 800-292-4706 or from out of state call 517-373-7660, and
     - 911 (or their primary public safety answering point) per Section 3111b of Part 31 of Act 451, effective June 15, 2004

  2. Submit written report within 10 days after the release. Mail the report to:
     - DEQ Water Bureau District Supervisor (see Appendix C for mailing addresses)
     - **Local health department**, environmental health section per Section 3111b of Part 31 of Act 451, effective June 15, 2004

     You may use the form **"Spill or Release Report" (EQP 3465)** available on the Internet, or submit a written report containing the information identified in R 324.2007(2). Include

     a. Cause of release.

     b. Discovery of release.

     c. Response measures taken or schedule for completion of measures to be taken, or both.

     d. Measures taken to prevent recurrence of similar releases.

     If you are required to submit a written release report to a DEQ division (for example a permit may require reporting of releases) and are subject to the Part 5 rule reporting requirements, if the other required report contains the information listed, it is not necessary to also submit a separate report to the Water Bureau.

     Releases that go into a public wastewater treatment plant (WWTP) and meet Part 5 rule conditions are also reportable to the Water Bureau.

DUE DATES AND NOTIFICATIONS

Existing facilities subject to these rules were to have a PIPP prepared or updated by August 31, 2003. New, or existing facilities that are changing operations so they will be meeting threshold management quantities, should have a PIPP completed before beginning those operations. Plans must be reviewed every three years or after any release that required implementation of the plan.

Notification that a PIPP was prepared or updated must be sent to the following:

- **Local emergency planning committee** (LEPC).
- **Local health department**.
- DEQ's **Water Bureau district office**. A certification stating the facility is in compliance with all the Part 5 rules must also be submitted to the DEQ.

LEPC and local health department contact information is available on DEQ's Emergency Planning web site.

When submitting the certification to the DEQ, there is not a specific form required to be used. Following is sample certification language that may be used, but not required:

"Under penalty of law, this certifies that (company name) at (site address) is in full compliance with the Part 5 administrative rules pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). A copy of the Pollution Incident Prevention Plan (PIPP) [or Integrated Contingency Plan (ICP) if prepared] may be requested by [include who and how to contact to request a copy]." The facility has meet threshold planning quantities for (indicate oils, salts, or regulated chemicals in Rule 9). [Note: the type of polluting material is not required to be identified but companies are being asked to indicate what category of polluting materials are on site].

Include a signature, title, date, phone number, and mailing address if different than the site address.

For notifying the local entities, check how they prefer being contacted. You may:

- Submit a letter explaining you are notifying them as required by the Part 5 administrative rules pursuant to Part 31 (Water Resources Protection) of Act 451 that your company has completed a PIPP or ICP.

- Call them, but keep written documentation when you called and who you spoke to. Make sure to provide your company's name, site address (and mailing address if different), and who to contact to request a copy of the plan.

Although not required by the rules, check if the local agency would like a copy of the polluting material inventory or the category of polluting material (i.e., salt, R 324.2009 materials, or oils) that is on site submitted with the notification. Due to security issues some facilities or local agencies may not want the list included. If the local entities know what material is on site, it may help them decide if they will request a copy of your plan. A facility must submit a copy of the plan within 30 days of receiving the request.

PIPPs may be combined with other plans into an Integrated Contingency Plan (ICP) as long as all of the information required to be in the PIPP is included. See Section 6.2.8 for ICP information. More emergency planning information and PIPP completion checklist is available through the DEQ's emergency planning web site at **www.michigan.gov/deqemergencyplan**.

6.2.3 Spill Prevention, Control, and Countermeasure (SPCC) Plan

NOTE: There are discussions to further streamline the SPCC regulations at the time of publication. Proposed rules and information is posted at **www.epa.gov/oilspill** or call EPA Region 5, Oil Planning and Response Section, at (312) 353-8200.

The EPA, not the DEQ, oversees the federal Spill Prevention, Control, and Countermeasure (SPCC) requirements contained in Title 40, Part 112 of the Code of Federal Regulations (40 CFR 112). The SPCC regulation originated in the federal Water Pollution Act of 1972 (later renamed the Clean Water Act [CWA]). The regulations address ways to prevent and handle discharges of **oils-EPA** from various facilities and covers emergency planning, secondary containment and other storage requirements, and release reporting.

Oils-EPA include vegetable based oils including products used on conveyor belts and coatings on certain food products, animal fats, synthetic oils, petroleum, and refined products like hydraulic oils, mineral spirits, gasoline, diesel fuel, kerosene, etc. EPA does not have a comprehensive list of oils at this time, but other examples of oils are at www.uscg.mil/vrp/faq/oil.shtml. Exclusion from this web site list does not mean the oil isn't regulated under SPCC. Questions pertaining to what material are considered oils should be directed to EPA Region 5.

Your facility may be subject to the SPCC regulation if:

1. A release from your facility could potentially reach navigable waters or adjoining shorelines. Most of Michigan meets this condition. Discuss with EPA Region 5 if a site might be exempted. The exemption determination is based on geographical aspects of the facility such as proximity to navigable waters, land contour or topography, drainage, and soil conditions. If any **oils-EPA** could reach a sewer line, drainage ditch, intermittent stream bed, or the like that discharges into navigable waters, either directly or indirectly, then the facility would be subject to SPCC regulations if they have met threshold storage amounts.

AND

2. The storage capacity for **oils-EPA** at your facility meets any of the following amounts, or EPA determines the facility needs one based on other concerns:

- The total aboveground storage capacity exceeds 1,320 gallons.
- Underground storage capacity exceeds 42,000 gallons.

Note that the applicability of the SPCC regulation is based on the capacity of the facility to store **oils-EPA** and not upon the actual amount of oil stored. Do not include containers less than 55 gallons when calculating the threshold amounts. If you have oil-filled equipment with 55 gallons or more of oil, you need to include the amount of this oil when determining your threshold amounts, but the equipment does not need to meet the bulk storage container requirements. See the rules for conditions when secondary containment is not required. See the EPA guidance and regulations for more information about other situations where oil is not required to be counted when calculating threshold amounts.

The current compliance date is October 31, 2007, but EPA has proposed timeframes* to amend when an SPCC must be prepared:

A facility (other than a farm) starting operation...	***Must...***
On or before August 16, 2002	Maintain its existing Plan Amend and implement the Plan no later than July 1, 2009*****
After August 16, 2002 through July 1, 2009	Prepare and implement a Plan no later than July 1, 2009*****
After July 1, 2009	Prepare and implement a Plan before beginning operations*****

Complete a review and evaluation of the SPCC plan at least once every 5 years from date facility became subject to regulations. See 40 CFR 112.5(b) for more information.

Three areas which should be addressed in the Plan are:

1. Operating procedures the facility implements to prevent oil spills;
2. Control measures installed to prevent oil from entering navigable waters or adjoining shorelines; and
3. Countermeasures to contain, cleanup, and mitigate the effects of an oil spill that has an impact on navigable waters or adjoining shorelines.

Some other important elements of an SPCC Plan include, but are not limited to, the following:

- Facility diagram
- Oil spill predictions
- Facility drainage
- Facility inspections
- Site security
- Five-year Plan review

- Management approval
- Appropriate secondary containment or diversionary structures
- Loading/unloading requirements and procedures for tank car and tank trucks
- Personnel training and oil discharge prevention briefings
- Brittle fracture evaluations
- Bulk storage container compliance
- Transfer procedures and equipment (including piping)

Recent amendments allow some facilities the option to self-certify their SPCC Plans in lieu of review and certification by a Professional Engineer if:

- The oil storage capacity is 10,000 gallons or less
- The facility did not have any of the following oil release situations:
  - A single discharge exceeding 1,000 U.S. gallons, or
  - No two discharges as described in 40 CFR112.1(b) each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC Plan certification date, or since becoming subject to the SPCC requirements if the facility has been in operation for less than three years
- The plan does not include ‘‘environmentally equivalent’’ alternatives to required plan elements as provided in 40 CFR 112.7(a)(2) or contingency planning in lieu of secondary containment as provided in40 CFR 112.7(d) on the basis of ‘‘impracticability.’’

See the “SPCC Guidance for Regional Inspectors” on the web site for sample plans and other information.

Keep a copy of the SPCC plan onsite if the facility is normally attended for at least four hours per day. Otherwise, it must be kept at the nearest field office. The SPCC Plan must be available to EPA for on-site review and inspection during normal working hours. **SPCC plans are not submitted to the DEQ or EPA unless requested.**

If you are combining a SPCC plan with other plans, make sure to include a detailed cross reference to requirements in 40 CFR 112.7 that clearly indicates where SPCC information is located. See the ICP guidance materials discussed in Section 6.2.8. In addition to the federal release reporting requirements, make sure the SPCC plan also includes the Part 5 rules (Spillage of Oil and Polluting Materials) release reporting conditions as discussed in Section 6.2.2.

It is unlikely your facility will handle, store, or transport animal fats and vegetable oils and transfer large volumes of oil over water or store one million gallons or more of oil, but if it does, see the EPA web site for Facility Response Plan (FRP) requirements for "substantial harm" facilities. A "substantial harm" facility is a facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines. This regulation is in 40 CFR 112 Appendix C. See the

EPA website for more information.

The SPCC regulations and guidance, sample SPCC plans, and more information can be accessed at www.epa.gov/oilspill. Contact EPA Region 5 at (312) 353-8200 for questions regarding oil SPCC and FRP requirements.

6.2.4 Storm Water Pollution Prevention Plan (SWPPP)

If your facility is required to have a permit for the discharge of storm water associated with an industrial activity, (see Section 3.2.3.d), you will need to prepare a Storm Water Pollution Prevention Plan (SWPPP). DEQ's Water Bureau (WB) has many materials to help you prepare a SWPPP. Materials include:

- A checklist,
- Certified operator training materials, and
- Sample SWPPP templates.

These materials can be obtained at **www.michigan.gov/deqwater** (select "Surface Water" then "Storm Water") or from the WB district office (see Appendix C for phone numbers).
Plans must be:

- Signed by the certified storm water operator and either the permittee or an authorized agent,
- Kept on-site, and
- Reviewed annually with records kept from that review.

After the plan is completed, send notification that the plan was completed to the WB district office. Another requirement is to update the SWPPP whenever there are changes or releases at the facility that have the potential to increase the risk of material contact with storm water.

6.2.5 Risk Management Program (RMP)

As of June 21, 1999, companies of all sizes that use certain listed chemicals were required to submit plans that detail how they will prevent accidental chemical releases from occurring. These new compliance requirements, known as the Accidental Release, Risk Management Planning (RMP) requirements, are found under Section 112(r) of the 1990 Clean Air Act Amendments. The new regulations in Title 40, Part 68 of the Code of Federal Regulations build on both the emergency preparedness and prevention initiated under the Emergency Planning and Community Right-to-Know Act (EPCRA) (see Chapter 5) and the Process Safety Management Standard of the Occupational Safety and Health Act (OSHA).

A facility must develop a Risk Management Plan (RMP) if it has **CAA Section 112(r) substance** at or above a specific threshold quantity that is set for each substance. If a **CAA Section 112(r) substance** is classified as being toxic and is part of a mixture, it must comprise one percent or more of the total mixture to be covered under the RMP requirements.

Common Fruit and Vegetable Processes and RMP Applicability

Process Type	Regulated Substance	Threshold Quantity
• Closed loop refrigeration system • Storage or nurse tanks that are stand alone, interconnected or piped to other processes	Anhydrous Ammonia Ammonia (20% + concentration) Percentage of anhydrous ammonia or 20%+ concentration of ammonia content in mixtures	10,000 lbs 20,000 lbs 10,000 and 20,000 lbs, respectively
• Facility owned and/or operated wastewater treatment plants	Chlorine Percentage of chlorine content in mixtures	2,500 lbs 2,500 lbs
• Anaerobic digester	Methane	10,000 lbs

There are three levels of compliance with Section 112(r) called “Programs.” Facilities with an activity that uses, stores, manufactures, processes, handles, or transports on-site a **CAA Section 112(r) substance** over the threshold quantity, are required to conduct some level of accidental release “Program” planning. The specific requirements a facility must meet depend on which Program(s) applies to its business. A manufacturer may have more than one process that meets more than one Program requirement. The Programs are comprised of four major components:

1. A hazard assessment, which includes a worst-case and alternative chemical release analysis.

2. Establishment of a management program (who’s in charge of the RMP).
3. A prevention program to reduce the occurrence of an accidental release.

4. An emergency response program to protect public health and the environment.

RMPs must be submitted in an electronic format to the EPA’s RMP Reporting Center. Small businesses may submit a paper RMP if they obtain a waiver from EPA.

Call the National Center for Environmental Publications and Information at (800) 490-9198 to obtain the RMP software and printed forms, or access the forms and additional information at: **www.michigan.gov/deqemergencyplan** (select “Risk Management Plan”).

You may also contact the ESSD, Michigan's Environmental Assistance Program, at (800) 662-9278 for more RMP information or assistance with developing the plan.

The EPA's "List of Lists", that contains the **Clean Air Act (CAA) 112(r) substance** list, is electronically available at www.michigan.gov/deqemergencyplan.

6.2.6 Emergency Action Plan

An Emergency Action Plan is required when a facility stores flammable and combustible liquids on site in aboveground containers, unless the following exemptions apply:

- Liquids are used solely for on site consumption as fuels.
- Operations where Class II or Class III liquids are stored in atmospheric tanks or transferred at temperatures below their flash points.
- Mercantile occupancies, crude petroleum exploration, drillings and well servicing operations, and normally unoccupied facilities in remote locations.

The requirement is included in Chapter 5 of the National Fire Protection Association (NFPA) pamphlet number 30, 2000 edition, Section 5.12, which is adopted by the state Flammable and Combustible Liquid Rules. This pamphlet can be ordered from the NFPA at **www.nfpa.org**.

Don't confuse this Emergency Action Plan with the plan required by MIOSHA.

The facility needs to evaluate site specific conditions and risks of fire hazards, including the emergency response capabilities of local emergency services.

The plan needs to include the following:

- Procedures to follow in case of fire, such as sounding the alarm, notifying fire department, evacuating people, controlling and extinguishing the fire.
- Procedures and schedules for having drills of these procedures.
- Identifying and training employees to carry out assigned duties.
- Maintenance of fire protection equipment.
- Procedures for shutting down or isolating equipment to reduce the release of liquid.
- Identifying alternate measures for safety of employees.

See Section 4.3 for plan requirements for underground storage tanks and for more information on storage of flammable and combustible liquids. Contact the Waste and Hazardous Materials Division, Storage Tank Unit, at (517) 335-7211 for questions or go to **www.michigan.gov/deqland** (select "Storage Tanks").

6.2.7 HAZMAT Security Plan

Depending on the facility's operations and shipping of hazardous waste, they may be subject to the USDOT transportation regulations, Subpart I Part 172 (49 CFR 172.800), that require

shippers of any of the following hazardous materials to develop a hazardous materials security plan:

- CFR 172, including hazardous waste. Placards are required when the shipment is in excess of 1000 pounds.
- Highway route-controlled quantities of Class 7 (radioactive materials) as defined in 49 CFR 173.403, in a motor vehicle, rail car, or freight container.
- More than 25 kg (55 lb) of Division 1.1, 1.2, or 1.3 (explosive) materials in a motor vehicle, rail car, or freight container.
- More than 1 L (1.06 qt) per package of any material that is extremely toxic by inhalation as defined by 49 CFR 171.8, that meets criteria for Hazard Zone A, as specified by 49 CFR 173.116(a), or 49 CFR 173.133(a).
- Hazardous materials in bulk packaging having a capacity of 13,248 L (3,500 gal) or more for liquids or gases, or 13.24 cubic meters (468 cubic feet) or more for solids.
- Hazardous materials, not in a bulk package, of 2,268 kg (5,000 lb) gross weight or more of a class of hazardous materials for which placarding of the vehicle, rail car, or freight container is required for that class under the provisions of Subpart F of 49 CFR 172.
- Any quantity of hazardous material that requires placarding under Subpart F of 49 CFR 172, including hazardous waste. Placards are required when the shipment is in excess of 1000 pounds.
- Select agents or toxins regulated by the Centers for Disease Control and Prevention in 42 CFR 73.

A written security plan must contain the following sections:

- Personnel Security
- Unauthorized Access
- En Route Security

See the "Guide to Developing an Effective Security Plan for the Highway Transportation of Hazardous Materials" at **www.fmcsa.dot.gov/safety-security/hazmat/security-plan-guide.htm**. Many of the other emergency planning requirements cover some components required within the security plan.

The plan must be made available to the employees responsible for implementing it. Unlike other contingency plans, the security plan contents should be shared only with those employees whose responsibilities involve the shipment and handling of hazardous materials. Typically, this could include plant security, EHS representatives, maintenance, and shipping/receiving personnel. An appropriate list of personnel who require disclosure of the plan contents should be developed.

Keep the security plan as long as it remains in effect and any updates or changes must be communicated to the affected employees.

Every hazmat facility needs security training (see Section 4.4.10) and must keep training records. Even if you don't ship any of the above hazardous materials requiring a security plan, your employees must receive hazmat security awareness training if you ship any hazardous materials. This training can be combined with other required training sessions.

Go to **hazmat.dot.gov/regs/rules/final/68fr/68fr-14509.htm** for this rule. Also see the US DOT rule at **hazmat.dot.gov/regs/rules/final/70fr/70fr-73156.htm** issued on December 9, 2005 that revises terminology, definitions, and requirements for consistency with the Hazardous Materials Safety and Security Reauthorization Act of 2005.

6.2.8 Integrated Contingency Plan (ICP)

Many facilities are required to maintain more than one emergency response plan. If you are subject to plan requirements under multiple regulations, you may combine all the required components into one plan called an Integrated Contingency Plan (ICP). The National Response Team's ICP Guidance provides a format for a comprehensive emergency response plan. This one-plan guidance is intended to be used by facilities to prepare emergency response plans for responding to releases of oil and non-radiological hazardous substances. It can be used by *any* facility, whether or not the facility is subject to specific planning requirements under federal and/or state regulations. The guidance was published in 1996 and is available on DEQ's Emergency Planning web site **www.michigan.gov/deqemergencyplan**.

Use of the ICP format by facilities is supported by both federal agencies (EPA, Department of Transportation, Department of the Interior, and Department of Labor) and state agencies (Michigan's State Emergency Response Commission, State Police, DEQ, Department of Agriculture, and Department of Labor and Economic Growth). Michigan agencies strongly encourage facilities to use the ICP format.

There are three main sections of an ICP as described below:

Plan Introduction.

This section is designed to provide facility response personnel, outside responders, and regulatory officials with basic information about the plan and the entity it covers. It includes:

- Purpose and Scope of Plan Coverage
- Table of Contents
- Current Revision Date
- General Facility Identification Information

Core Plan.

This section is intended to reflect the essential steps necessary to initiate, conduct, and terminate an emergency response action. It should be concise, easy to follow, reference annexes that provide more detailed information, and fit into the glove-box of a response vehicle. It includes:

- Discovery
- Initial Response Procedures

- Sustained Actions
- Termination and Follow-Up Actions

Supporting Annexes.
The annexes are designed to provide key supporting information for conducting an emergency response under the core plan as well as document compliance with regulatory requirements not addressed elsewhere in the ICP. They should augment, not duplicate, core plan information. Annexes include:

- Facility and Locality Information
- Notification Requirements
- Response Management System
- Incident Documentation
- Training and Exercises/Drills
- Response Critique and Plan Review and Modification Process
- Prevention
- Regulatory Compliance and Cross-Reference Matrices

In addition to the ICP guidance, information on many of the plans that can be integrated into the ICP, such as SPCC, RMP, PIPP, and SWPPP, are available on DEQ's Emergency Planning web site. This site includes guidance specific to the inclusion of federal and state plan requirements into the ICP, contacts for help regarding requirements of specific plans, emergency planning information and workbooks for facilities that are not subject to specific planning requirements, and plan submittal guidance. *Please read about where you should submit your plan before you submit!*

6.3 Release Notification Requirements in Michigan

Chemical releases in Michigan are potentially reportable under one *or more* of twenty-seven different state and federal regulations. Determining which regulations apply to a specific release can be an overwhelming task. The **"Release Notification Requirements in Michigan"** table (pages 6-22 through 6-32) was compiled by Michigan SARA Title III Program in the DEQ to help owners and operators of facilities in Michigan, including vehicles and farms, determine their potential notification and reporting requirements in the event of a chemical release.

Check your permits, licenses, registrations, pollution prevention plans, and local ordinances for *additional* release reporting requirements. In particular, all NPDES permits and most air permits have release reporting requirements in them that are not included on this table.

The term "release" means spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing. The term "chemical" includes substances considered to be toxic or hazardous as well as substances as seemingly harmless as salad oil. The notification requirements almost always include immediate initial notification. The EPA interprets "immediate" to mean that the notification must be made within 15 minutes after discovery of the release. This table should therefore be used as a tool to identify potential

reporting requirements *before* a release occurs. The table outlines what releases must be reported, when they must be reported, and to whom they must be reported.

Links to the release reporting forms and chemical lists referenced in the table are available on the DEQ's Release Reporting web site at **www.michigan.gov/deqrelease**. Visit this site for updated versions of this table, and DEQ and LEPC contact information. For information regarding a specific regulation, contact the agency specified in the "notes" column of the table. If this is a DEQ division, contact the *district* division office.

The EPA has published a consolidated list of chemicals subject to SARA Title III and Section 112(r) of the Clean Air Act. This document is called the "List of Lists" is available in two formats: as a pdf file and as an Excel file updated October 2006. A link to it is available through the DEQ's Release Reporting web site. The "List of Lists" includes:

- **Hazardous substances – CERCLA** with reportable quantities (RQ) for releases – 40 CFR 302, Table 302.4.
- SARA Title III Section 304 **Extremely hazardous substances** (EHS) with RQs for releases – 40 CFR 355, Appendix A.
- SARA Title III Section 313 **Toxic chemicals** – 40 CFR 372 Subpart D.
- Clean Air Act Section 112r Extremely Hazardous Air Pollutants with Threshold Quantities for Risk Management Planning.

Written follow-up report forms that are specified in the table are required by regulation. The DEQ has developed a generic written report form called **"Spill or Release Report" (EQP 3465)** that can be used to report releases of:

- **Hazardous Substances-CERCLA** and **extremely hazardous substances** under SARA Title III.
- **Hazardous waste-DEQ** under Part 111 of Act 451.
- **Liquid industrial waste** under Part 121 of Act 451.
- **Hazardous substances** under Part 201 of Act 451.
- **Polluting materials** under Part 31 of Act 451, Part 5 Rules.

It is recommended that you also use this generic report form to record initial notifications.

After reviewing the table, you will see that if you have a release, determining if, when, and to whom a release should be reported can be a complex task even if you have are familiar with the table. It is therefore recommended that if there is a release, immediately call the following numbers even if the content or quantity of the released material has not yet been determined:

1. **911** to notify Local authorities
2. **800-292-4706** (PEAS) to notify State authorities
3. **800-424-8802** (NRC) to notify Federal authorities

You can then deal with the release, assess the situation, and make additional notifications as required (e.g. as specified in the table or in your permits). Remember that there is NO PENALTY FOR OVER-REPORTING! Your follow-up report will provide details that explain why a release was or was not reportable.

General questions or comments regarding this table should be directed to the Michigan SARA Title III Program at (517) 373-8481 or by emailing **deq-ead-sara@michigan.gov**.

Acronyms used in the table are defined at the end of the table.

While diligent efforts have been made to assure that the information provided in this table is accurate and complete as of November 20, 2006, there is no guarantee that it covers all of the regulatory requirements for release notification and reporting in Michigan.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
SARA Title III Section 304 40 CFR 355.40 (**EHS & Hazardous Substances**)	Release of a CERCLA **hazardous** substance (40 CFR 302, Table 302.4) or **Extremely Hazardous** Substance (EHS) (40 CFR 355, Appendix A) from a facility (including motor vehicles, rolling stock, and aircraft) in a quantity equal to or greater than its corresponding reportable quantity in any 24-hr period that migrates beyond the facility boundaries. Includes continuous release reportable under CERCLA Section 103. Excludes release that is federally permitted or that results in exposure to persons solely within the boundaries of the facility. See 67 FR 18899 (4/17/02) for guidance on the CERCLA federally permitted release definition for certain air emissions. See 71 FR 58525 (10/4/06): Exemption for < 1000 lbs of NOx released to the air from combustion or combustion-related activities. 12/27/04 phosmet was removed from the EHS list.	Immediate (within 15 minutes after discovery): to LEPC(s) of any area(s) potentially affected, and SERC (DEQ PEAS line accepts notification on behalf of SERC) by owner or operator. Continuous releases must be identified as such and are reported initially and when there is a significant change in the release. Transportation related releases can be reported to 911.	As soon as practicable (within 7 days) after release: to LEPC(s) and SERC. For continuous releases: Initial written within 30 days after initial telephone notification & Follow-up within 30 days of first anniversary of initial written notification: to LEPC(s) and SERC. Michigan SARA Title III Program accepts reports on behalf of the SERC.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) Contact your LEPC for a phone number to report releases. Call 911 if your LEPC is not active. For further information contact Michigan SARA Title III Program 517-373-8481
CERCLA Section 103 40 CFR 302 (**Hazardous Substances**)	Release into the environment of a CERCLA **hazardous** substance (40 CFR 302, Table 302.4) or hazardous constituent in a mixture or solution (including hazardous waste streams) from a vessel or facility (including transport vehicles and aircraft) in a quantity equal to or greater than its corresponding reportable quantity in any 24-hour period. See 40 CFR 302.6 for notification requirements for radionuclide releases. Includes continuous release: occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes. Excludes release that is federally permitted. See 67 FR 18899 (4/17/02) for guidance on the CERCLA federally permitted release definition for certain air emissions. See 71 FR 58525 (10/4/06) re Exemption for NOx releases to the air of < 1000 lbs from combustion or combustion-related activities.	Immediate (within 15 minutes after discovery): to NRC by person in charge of vessel or offshore or onshore facility. Continuous releases must be identified as such and are reported initially and when there is a significant change in the release.	For continuous releases only: Initial written within 30 days after initial telephone notification & Follow-up within 30 days of first anniversary of initial written notification: to EPA Region 5.	U.S. Coast Guard National Response Center (NRC) 800-424-8802 For further information contact Michigan SARA Title III Program 517-373-8481 or EPA's RCRA, Superfund & EPCRA Call Center 800-424-9346

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 201, **Environmental Remediation**	Unpermitted release into the environment over a 24-hour period of a **hazardous** substance (*2001 version* of the CERCLA list, 40 CFR 302, Table 302.4) in a quantity equal to or greater than its corresponding reportable quantity. Does not include release solely from UST systems regulated under Part 213, and release solely from disposal area licensed under Part 115 and discovered through disposal area's hydrogeological monitoring plan. Release of substance regulated by MI Dept of Agriculture (MDA) (fertilizer, soil conditioner, or pesticide) excluding normal agricultural practices: *also* report to MDA.	Within 24 hours after discovery: to DEQ-RRD district office (PEAS after hours) by owner, operator or person holding easement interest. Report agricultural release to MDA.	Upon request: to DEQ-RRD district supervisor. Specific forms required for: "Notice Regarding Discarded or Abandoned Containers" (Form EQP4476) and "Notice of Migration of Contamination" (Form EQP4482).	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) MDA Agriculture Pollution Emergency Hotline: 800-405-0101 (from within MI) or 517-373-0440 (from outside MI) For further information contact DEQ-RRD
NREPA 1994 PA 451 Part 83, Pesticide Control Regulation 640, Commercial Pesticide Bulk Storage (**Agricultural**)	Release to the environment of a commercial **pesticide** >5 gallons liquid or 100 pounds dry. The term "release" excludes normal agricultural practices. The regulation specifies that a pesticide release reportable under SARA Title III shall be reported to PEAS and the NRC.	Immediate: to PEAS* Also notify NRC for reportable spills as defined by SARA Title III & CERCLA. *MDA prefers direct notification to their hotline. PEAS forwards all agriculture calls to MDA.	Within 90 days: to MDA Environmental Stewardship Div. a revised site plan.	MDA Agriculture Pollution Emergency Hotline: 800-405-0101 (from within MI) or 517-373-0440 (from outside MI) PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) NRC 800-424-8802 For further information contact MDA 517-373-1087
NREPA 1994 PA 451 Part 85, Fertilizers Regulation 641 Commercial Fertilizer Bulk Storage Regulation 642, On Farm Fertilizer Bulk Storage (**Agricultural**)	Release to the environment of a commercial **fertilizer** >55 gallons liquid or 650 pounds dry; or an on farm fertilizer > 55 gallons liquid. The term "release" excludes normal agricultural practices. The term "liquid fertilizer" excludes anhydrous ammonia.	Immediate: to MDA by commercial bulk storage facility personnel (For farms, the regulation does not specify who makes the report.)	Not required.	MDA Agriculture Pollution Emergency Hotline: 800-405-0101 (from within MI) or 517-373-0440 (from outside MI) For further information contact MDA 517-373-1087

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
Fire Prevention Code 1941 PA 207 Section 29.5g	A fire, explosion, spill, leak, accident, or related occurrence that involves the transportation, storage, handling, sale, use, or processing of hazardous material by a firm, person, or vehicle. **Hazardous** material = explosives, pyrotechnics, flammable gas, flammable compressed gas, flammable liquid, nonflammable compressed gas, combustible liquid, oxidizing material, poisonous gas or liquid, LPG, or irritating, etiologic, radioactive, or corrosive material. Per EO 2003-18, DLEG Bureau of Construction Codes and Fire Safety will receive reports previously sent to the State Fire Marshall.	Immediately following incident, report known details regarding incident: to DLEG Bureau of Construction Codes and Fire Safety *and* organized local fire department by owner of firm or vehicle or the person *and* the chief of first police or organized fire dept upon scene of incident.	Not required.	Contact DLEG Bureau of Construction Codes and Fire Safety: 24-hr voice mail – 517-322-5316 24-hr pager – 888-237-4081 For further information: contact local fire department
Fire Prevention Code 1941 PA 207 Part 2 of Storage and Handling of Flammable and Combustible Liquids rules (FL/CL code)	A release from an **AST** system of >55 gal of any **flammable or combustible liquid** (flash point <200 degrees Fahrenheit) to the ground or within a secondary containment area during any 24 hour period.	As soon as practicable after detection of release: to PEAS by owner or operator.	Within 10 days after release: to DEQ (WHMD, Storage Tank Unit) outlining cause, discovery, response to prevent recurrence.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information: contact DEQ-WHMD Storage Tank Unit

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
*****This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
49 CFR 171 (**Transportation of Hazardous Materials**)	Initial verbal notice: Incident during transportation (including loading, unloading, temporary storage) involving (1) **hazardous** material and resulting in death, injury requiring hospitalization, public evacuation ≥ 1 hour, major transportation artery or facility closure ≥ 1 hour, or flight pattern alteration; (2) fire, breakage, spillage, or suspected contamination involving **radioactive** material or **infectious** substances; (3) **marine pollutant** exceeding 450 L (119 gal) liquid or 400 kg (882 lbs) solid; (4) other per judgment of person in possession of the hazardous material (e.g., continuing danger to life exists at scene of incident). Hazardous material = CERCLA hazardous substance (40 CFR 302, Table 302.4), hazardous waste (40 CFR 262), marine pollutant (49 CFR 172.101 Appendix B), elevated temperature material, listed on Hazardous Materials Table (49 CFR 172.101), or meets criteria for hazard class/division in 49 CFR 173. Written follow-up report: Required for all of above, plus any unintentional release of hazardous material from a package (including tank); or any quantity of hazardous waste discharged during transportation; or structural damage to lading retention system, even if no release, on specification cargo tank with ≥ 1000 gal capacity containing hazardous material; or undeclared hazardous material discovered.	As soon as practical but no later than 12 hours after occurrence of the incident: to NRC by each person in physical possession of the hazardous material. For infectious substances, notice may be given to the Director, Centers for Disease Control and Prevention, U.S. Public Health Service instead of NRC.	Within 30 days after discovery: to US DOT on DOT Form F 5800.1 (01-2004) “Hazardous Materials Incident Report.” Report must be updated w/i 1 year of incident if: Death results from injury; hazardous material or package info on prior report misidentified; damage, loss or cost not known on prior report becomes known or changes by $25,000 or 10%. See regulation for exceptions to written report.	NRC 800-424-8802 U.S. Public Health Service 800-232-0124 For further information contact US DOT Hazardous Materials Information Center at 800-467-4922 or online at http://hazmat.dot.gov
NREPA 1994 PA 451 Part 31, Water Resources Protection (Release to **surface of ground**, **surface water , groundwater** or **public sewer system**)	Unpermitted release directly or indirectly to public sewer system, surface of ground, surface water or groundwater from an oil storage facility or on-land facility of a “**polluting material**” (**oil**, **salt**, or any material specified in table 1 in R 324.2009) in excess of its threshold reporting quantity during any 24-hour period. See Part 5 rules, effective 8/31/01, for details and exemptions. HB 5586 effective 6/15/04 amended the reporting requirements.	As soon as practicable after detection: to PEAS *and* 911 by owner, operator or manager. State agencies call 911 if release reported to them by another state or Canada.	Within 10 days after release: to DEQ-WB district supervisor *and* to the local health department where the release occurred, outlining cause, discovery, response & prevention of recurrence.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ-WB-FOD

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
*****This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**.
Additional reporting requirements might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
CWA Section 311 33 CFR 153 (**Navigable waters** – Coast Guard/DOT) Control of Pollution by **Oil** and **Hazardous** Substances, Discharge Removal	Discharge of a harmful quantity of **oil** or a **hazardous** substance from a vessel or onshore or offshore facility into or upon navigable **waters** of the United States or adjoining **shorelines**. Harmful quantity = oil discharge that violates applicable water quality standards, or causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines; or a CERCLA hazardous substance (40 CFR 302, Table 302.4) in a quantity equal to or greater than its corresponding reportable quantity. Oil = oil of any kind or in any form including petroleum, crude oil, petroleum refined products, sludge, oil refuse, oil mixed with wastes, etc., as well as vegetable and animal oils.	Immediate: to NRC by person in charge of vessel or facility. If direct reporting to NRC not practicable, may report to district Coast Guard or EPA predesignated On-Scene Coordinator (OSC).	Not required.	NRC 800-424-8802 District 9 Coast Guard 216-902-6117 EPA Region 5 for predesignated OSC 312-353-2318 For further information contact EPA Region 5 at 312-353-8200 or District 9 Coast Guard at 216-902-6054
CWA Section 311 40 CFR 110 (**Discharge of Oil**)	Discharges of **oil** that violate applicable **water** quality standards, or cause a film or sheen upon or discoloration of the surface of the water or adjoining **shorelines**, or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. Oil = oil of any kind or in any form including petroleum, crude oil, petroleum refined products, sludge, oil refuse, oil mixed with wastes, etc., as well as vegetable and animal oils.	Immediate: to NRC by person in charge of vessel or facility.	Not required.	NRC 800-424-8802 For further information contact DEQ-WB-FOD
NREPA 1994 PA 451 Part 615, Supervisor of Wells (**oil and gas production fields**)	A loss, spill or release of (1) any amount of **brine**, **crude oil**, or **oil or gas field waste** *unless* it is less than 42 gallons and occurs while an authorized representative is on site and is completely contained and cleaned up within 1 hour, or (2) any unpermitted amount of **natural gas**, or (3) **chemicals** used in association with oil and gas activities.	Within 8 hours after discovery of: 42 gallons or more of brine, crude oil, or oil or gas field waste, or any amount of chemical or natural gas, or; less than 42 gallons if the spill contacts surface water, groundwater, or other environmentally sensitive resources, or is not completely contained and cleaned up within 48 hours: to DEQ-OGS district office (PEAS after hours) by permittee.	Within 10 days after discovery of loss or spill: to DEQ-OGS district supervisor on Form EQP-7233 (Rev 03/99) "Report of Loss or Spill." Written report only for less than 42 gallons of brine, crude oil, or oil and gas field waste if spill does not contact surface water, groundwater, or other environmentally sensitive resources, and is completely contained and cleaned up within 48 hours.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ-OGS

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 211, **Underground Storage Tanks** Part 213, Leaking Underground Storage Tanks	Releases of a **regulated substance** of any amount from underground storage tank (UST) systems (includes the emergency shutoff valve on down) subject to registration; overfill from UST fillpipe or vent onto ground; release from aboveground pipe attached to UST system. Regulated substance = petroleum or CERCLA hazardous substance (40 CFR 302, Table 302.4) or substance listed in CAA title 1 part A sect 112. Petroleum includes, but is not limited to, crude oil, motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, and petroleum solvents.	Within 24 hours after discovery (Part 211) - Includes releases discovered years after UST system removed: to DEQ-WHMD central or district office, or PEAS, or via web or fax on Form EQP 3826 (Release Report-rev. 11/2005). If free product, Form EQP 3800 (Rev 02/2003) required by UST owner or operator, or employee of owner or operator.	At 90 days on Form EQP3841 if not closed, and at 365 days on Form EQP3842 if still not closed, and at closure on Form EQP3843 (all forms Rev. 02/2003), describing response action (Part 213): to DEQ-RRD district project manager.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) On-line reporting go to DEQ Release reporting web site, select "release reporting forms" then EQP 3826. Fax for UST release: 517-335-2245 For further information contact DEQ-WHMD or DEQ-RRD
NREPA 1994 PA 451 Part 111, **Hazardous Waste** Management (Generators; Treatment, Storage & Disposal Facilities (TSDF); Transporters)	Any amount of characteristic **hazardous waste** or listed hazardous waste (as defined in R 299.9203 "Hazardous Waste Rule 203") reaches the surface water or groundwater, or A fire, explosion, or other release of hazardous waste or hazardous waste constituent occurs that could threaten human health or the environment. or A release of >1lb (or ≤1lb if not immediately cleaned up) hazardous waste to the environment from a tank system or associated secondary containment system. Additional hazardous waste reporting requirements under NREPA Part 201 and CERCLA.	Immediate: to PEAS (or for Tank systems/secondary containment, within 24 hours of discovery: to DEQ-WHMD) and to NRC if threat to human health or environment outside facility by generator, or owner or operator of TSDF, or transporter.	For large quantity generators and TSDF: Within 15 days after incident IF the contingency plan had to be implemented: to DEQ-WHMD. For tank/secondary containment systems: Within 30 days of discovery: to DEQ-WHMD. For transporters: to US DOT if required per 49 CFR 171.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) NRC 800-424-8802 NREPA Part 111 requires transporters to comply with 49 CFR 171 and 33 CFR 153. For further information contact DEQ-WHMD
NREPA 1994 PA 451 Part 121, **Liquid Industrial Waste**	The **liquid industrial waste** spill could threaten public health, safety, welfare, or the environment, or has reached surface water or groundwater. Liquid industrial waste includes nonhazardous brine, by-product, industrial wastewater, leachate, off-spec commercial chemical product, sludge, sanitary or storm sewer clean-out residue, grease trap clean-out residue, spill residue, used oil, or other liquid waste not regulated by other laws.	Immediate: to PEAS and local authorities by generator, transporter, or owner or operator of facility. Refer to MCL 324.12111(1) for required report elements	Prepare within 30 days after incident. Submit upon request: to DEQ-WHMD district supervisor. Refer to MCL 324.12111(1) for required report elements	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ-WHMD
NREPA 1994 PA 451 Part 31, Water Resources Protection (**Sewer Systems**)	Discharge of untreated sewage or partially treated sewage from a **sewer system** onto land or into the waters of the state. "Sewer system" means a sewer system designed and used to convey sanitary sewage or storm water, or both.	Immediate (within 24 hours): to DEQ-WB district office (PEAS after hours); Local health depts.; Daily newspaper circulated in source & affected counties; & Affected municipalities.	At end of discharge: to same parties notified initially on Form EQP 5857 (Rev. 10/01) "Report of Discharges of Untreated or Partially Treated Sewage." Includes results of E. coli testing.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ-WB-FOD

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.

***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 41, **Sewerage Systems**	Discharges of pollutants from **sewerage systems** (which can include combined sewers) in excess of those authorized by a discharge permit issued by the DEQ to surface water or groundwater as a result of a facility breakdown or emergency. Sewerage systems handle sanitary sewage or other industrial liquid wastes.	Promptly: to DEQ-WB district office (PEAS after hours) by owner.	Within 72 hours: to DEQ-WB district supervisor, outlining cause, discovery, corrective actions taken to minimize impact, restore operations, and eliminate future unpermitted discharges.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ-WB-FOD
NREPA 1994 PA 451 Part 55, **Air Pollution** Control	Abnormal condition, start-up, shutdown, or malfunction that results in emissions exceeding permissible (in rule, permit or order) levels of **hazardous air pollutants** (HAPs) (CAA Sect. 112(b)) or **toxic air contaminants** (as specified in permit) for > 1 hour, or any air contaminant for > 2 hours. Written follow-up report only required for emission exceedences lasting > 2 hours.	As soon as possible, but not later than 2 business days after discovery: to DEQ-AQD district office (PEAS after hours) by owner or operator.	Within 10 days after start-up, shutdown, or abnormal condition, malfunction corrected. Or within 30 days of abnormal condition, malfunction discovery- whichever first: to DEQ-AQD district supervisor.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ-AQD
49 CFR 191 Transportation of Natural and Other **Gas by Pipelin**e	An incident, meaning: (1) Release of **gas** from a pipeline or of liquefied natural gas or gas from an LNG facility that results in: Death or hospitalization; or Property damage $\geq$ $50,000. (2) Event that results in emergency shutdown of LNG facility. (3) Significant event per operator. Written Incident reports not required for LNG facilities. Applies to pipeline systems and the transportation of gas through those systems in or affecting interstate or foreign commerce. (See 49 CFR 191.3 for details.)	Earliest practicable moment following discovery: to NRC by operator.	As soon as practicable, and within 30 days after discovery: to US DOT. on DOT Form PHMSA F 7100.1 (03-04) "Incident Report – Gas Distribution System." or PHMAS F 7100.2 (01-2002) "Incident Report – Gas Transmission and Gathering Systems" Supplemental report filed as necessary as soon as practicable. Written report not required for LGN facilities.	NRC 800-424-8802 For further information go to http://ops.dot.gov or contact US DOT PHMSA, Office of Pipeline Safety at 202-366-4595

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
49 CFR 195 Transportation of **Hazardous Liquids by Pipeline**	Release of hazardous liquid (**petroleum**, **petroleum products**, or **anhydrous ammonia**) or **carbon dioxide** from a pipeline system that results in any of the following: (a) Explosion or fire; (b) Release of ≥ 5 gallons (except if < 5 barrels released due to maintenance and release not otherwise reportable, confined to property, does not pollute water, and cleaned up promptly); (c) Death of any person; (d) Injury requiring hospitalization; or (e) Property damage > $50,000. (See 49 CFR 195.50, revised 1/8/02, for details) Applies to pipeline facilities and the transportation of hazardous liquids associated with those facilities in or affecting interstate or foreign commerce. (See 49 CFR 195.1 for details.)	Earliest practicable moment following discovery: to NRC by operator If Release caused: Death or hospitalization; Fire or explosion; Property damage; Water pollution; or was Significant per the operator.	As soon as practicable, and within 30 days after discovery: to US DOT on DOT Form PHMSA F 7000-1 (01-2001) "Accident Report – Hazardous Liquid Pipeline Systems" Supplemental report must be filed within 30 days after operator receives changes or additions to original report.	NRC 800-424-8802 For further information go to http://ops.dot.gov or contact US DOT PHMSA, Office of Pipeline Safety at 202-366-4595
1978 PA 368 Part 135, **Radiation** Control	For any emergency. Or for incident involving naturally occurring or accelerator produced **radioactive material**- Immediate notice if: Incident may have caused or threatens to cause: dose to body 25 rems, to skin 150 rems, to extremities 375 rems (per rule 247); 24 hour concentration exceeds 5000 times limits specified in table II of rules 261 to 269; contamination causes operation shut down for 1 week, or property damage >$100,000. Notice within 24 hours if: Incident may have caused or threatens to cause: dose to body 5 rems, to skin 30 rems, to extremities 75 rems (per rule 247); 24 hour concentration exceeds 500 times limits specified in table II of rules 261 to 269; contamination causes operation shut down for 1 day, or property damage >$1000.	Immediate or within 24 hours (see reporting criteria): to DEQ-Radiological Protection Program (PEAS after hours) or MI Dept of State Police (MSP) Operations Division. by licensee or registrant.	Within 30 days after release: licensee or registrant shall submit written report to DEQ-WHMD Hazardous Waste and Radiological Protection Section. Written report also required if level of radiation or concentration of radioactive material in unrestricted area >10 times any applicable limit. See Rule 250 (R 325.5250) for required report content.	DEQ-Radiological Protection Program 517-241-1274 MSP 517-336-6100 PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ Radiological Protection Program

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**.
Additional reporting requirements might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
10 CFR 20 (Standards for Protection Against **Radiation**)	For incident involving source, by-product, or special nuclear **radioactive material**- Immediate notice if: Event that may have caused or threatens to cause: effective dose equivalent to individual 25 rems, lens dose equivalent 75 rems, shallow-dose equivalent to skin or extremities 250 rads; individual could receive 5 times annual limit on intake in 24 hours. OR Any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1000 times the quantity specified in appendix C to part 20 under such circumstances that it appears to the licensee that an exposure could result to persons in unrestricted areas. Notice within 24 hours if: Event that may have caused or threatens to cause: an individual in 24 hours to receive effective dose equivalent >5 rems, lens dose equivalent >15 rems, shallow-dose equivalent to skin or extremities >50 rems; individual could receive >1 times annual limit on intake in 24 hours.	Immediate or within 24 hours (see reporting criteria): to USNRC by USNRC Licensee responsible for the incident.	Within 30 days of incident: licensee shall submit written report (report content specified in 10 CFR 20.2003) to USNRC. Written report also required for occurrences as specified in 10 CFR 20 Section 20.2203 and after the occurrence of any lost, stolen, or missing licensed material becomes known to the licensee, and if at the time the report is filed all licensed material in a quantity greater than 10 times the quantity specified in appendix C to part 20 is still missing.	US Nuclear Regulatory Commission (USNRC) 301-816-5100 For further information contact DEQ Radiological Protection Program 517-241-1274
1978 PA 368 Part 133, **Dry Cleaning**	Condition or incident presents a threat or hazard to **public health** or safety.	Immediate: to DEQ-AQD district office (PEAS after hours) by owner or operator.	Within 30 days after incident: to DEQ-AQD district supervisor.	PEAS: 800-292-4706 (from within MI) or 517-373-7660 (from outside MI) For further information contact DEQ-AQD
MIOSHA 1974 PA 154 Section 61, Records & Reports; Notice of **Fatalities or Hospitalization**	Any release that results in one **death** or the **hospitalization** of 3 or more persons.	Within 8 hours: to MIOSHA Hotline.	Not required.	MIOSHA Hotline 800-858-0397 For further information contact DLEG-MIOSHA 517-322-1814
TSCA 40 CFR 761.125 (**PCBs**)	Spills of **PCB**s at concentrations of 50 ppm or more and subject to decontamination requirements under TSCA that: contaminate surface water, sewers, drinking water supplies, grazing lands or vegetable gardens, or exceed 10 pounds. (TSCA specifies that these requirements are in addition to any under CWA or CERCLA. e.g. CERCLA requires spills of 1 pound or more to be reported to NRC.)	As soon as possible after discovery, and within 24 hours: to EPA Region 5.	Not required to be submitted. Records of cleanup and certification of decontamination shall be documented.	EPA Region 5 Toxic Program Section 312-886-6003 For further information contact EPA Region 5

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
SARA Title III Section 313 40 CFR 372 (**Toxic chemical** release reporting)	Covered facilities as defined in 40 CFR 372 subpart B are subject to **toxic** chemical release reporting for toxic chemicals and chemical categories listed in 40 CFR 372 subpart D. On 6/30/05, methyl ethyl ketone (MEK) was removed from the list of toxic chemicals. 71 FR 32464 (6/6/06) amended 40 CFR Part 372 to include NAICS subsector and industry codes to determine covered facilities.	Not applicable.	Annually by July 1: report aggregate releases (permitted & unpermitted) to EPA & SERC on EPA's Form R "Toxic Chemical Release Inventory Reporting Form" (EPA Form 9350-1, Rev. 08/2005)	Michigan SARA Title III Program accepts reports on behalf of SERC For further information contact Michigan SARA Title III Program 517-373-8481

Table prepared by the Michigan SARA Title III Program in the DEQ

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Acronyms used in table:

AQD= Air Quality Division
AST= Above Ground Storage Tank
BSR= Bureau of Safety & Regulation
CAA= Clean Air Act
CERCLA= Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR= Code of Federal Regulations
CWA= Clean Water Act
DEQ= Michigan Department of Environmental Quality
DLEG= Department of Labor and Economic Growth
DOT= Department of Transportation
EHS= Extremely Hazardous Substance
EO= Executive Order
EPA= U. S. Environmental Protection Agency
ESSD= Environmental Science & Services Division
FL/CL= Flammable and combustible liquids
FOD= Field Operations Division
FR= Federal Register
HAP= Hazardous Air Pollutant
HB= House Bill
LEPC= Local Emergency Planning Committee
LNG= Liquefied Natural Gas
LPG= Liquefied Petroleum Gas
MCL= Michigan Compiled Laws
MDA= Michigan Department of Agriculture
MIOSHA= Michigan Occupational Safety and Health Act
MSP= Michigan Department of State Police
NAICS= North American Industry Classification System
NRC= National Response Center (U.S. Coast Guard)
NREPA= Natural Resources & Environmental Protection Act
OGS= Office of Geological Survey
OPS= Office of Pipeline Safety (US DOT)
OSC= On Scene Coordinator
PA= Public Act (Michigan)
PCB= Polychlorinated biphenyl
PEAS= Pollution Emergency Alerting System
RQ= Reportable Quantity
RRD= Remediation & Redevelopment Division
RSPA= Research & Special Programs Administration (US DOT)
SARA= Superfund Amendments and Reauthorization Act of 1986
SERC= State Emergency Response Commission
TSCA= Toxic Substance Control Act
TSDF= Treatment, Storage & Disposal Facility
US DOT= U.S. Department of Transportation
USEPA= U. S. Environmental Protection Agency
USNRC= U. S. Nuclear Regulatory Commission
UST= Underground Storage Tank
WB= Water Bureau
WHMD= Waste & Hazardous Materials Division

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
*****This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**. **Additional reporting requirements** might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

6.3.1 Release Calculations

How to determine the reportable quantity of a product based on the reportable quantity of an ingredient.

Example Calculation: When is a release of gasoline reportable?
Under Michigan's Natural Resources & Environmental Protection Act (NREPA) Part 201 regulation, releases of CERCLA hazardous substances (as published in the *2001 version* of 40 CFR 302, Table 302.4) must be reported. Gasoline is not a CERCLA hazardous substance. However, some of the ingredients in gasoline are CERCLA hazardous substances and are reportable under this regulation.

This example shows you how to determine when a release of gasoline *in gallons* is reportable under NREPA Part 201 based on reportable quantities *in pounds* of the ingredients.

1. **Identify the hazardous ingredients, reportable quantities, and weight percents.**
   Look at the example MSDS for gasoline to find the hazardous ingredients and the weight percents of those ingredients. Look in the list of CERCLA hazardous substances published in 2001 to identify ingredients that are CERCLA hazardous substances, and find their reportable quantities. This list is available on the DEQ's Release Reporting web site under "Laws & Rules," 40 CFR 302 (July 2001 version)**.**

   Benzene (CAS number 71-43-2) is a CERCLA hazardous substance as defined in 2001. The reportable quantity (RQ) for benzene under CERCLA is 10 pounds. That means that a release of 10 pounds or more of benzene to the environment must be reported to the DEQ Remediation & Redevelopment district office (or PEAS after hours). The weight percent of benzene in the example gasoline is 0.4 to 5%. When calculating a reportable release, use the higher, weight percent.

2. **Calculate the weight of the gasoline.**
   Because the gasoline is a liquid measured in gallons, and the reportable quantity of benzene is in pounds, we must calculate the weight of a gallon of gasoline. The formula is as follows:

   Specific gravity of the product x 8.34 lb/gal (weight of water) = weight of the product in lb/gal

   The specific gravity, also called the relative density, can be found in the "Physical & Chemical Properties" section of the MSDS. It is a unit-less number that tells how much the substance weighs relative to the weight of water. If the specific gravity is 1, the substance weighs the same as water. If it is less than 1, then the substance weighs less than water. If you think about this logically, you know that gasoline floats on water (thus the sheen you see on water at boat launches), so you can conclude that gasoline must weigh less than water. The specific gravity is often reported as a range. In this example, the specific gravity is reported on the MSDS as a range of 0.72 to 0.75. If you plug these values into the calculation, this gasoline can weigh anywhere from 6.0 lb/gal to 6.3 lb/gal. When calculating a reportable release, use the higher, more conservative, value. Thus the weight we will use for our example gasoline is 6.3 lb/gal.

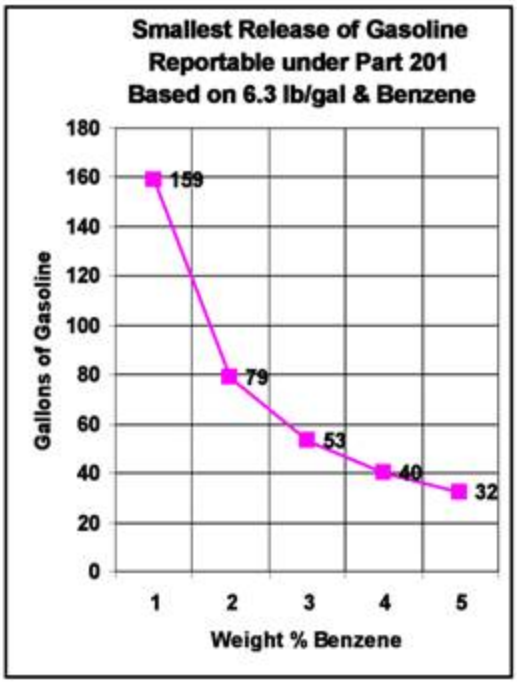
3. **Calculate the smallest reportable release of gasoline** under NREPA Part 201 based on the ingredient benzene. Here is the formula:

RQ of ingredient (lbs)÷ weight of product (lb/gal) ÷ weight% of ingredient = reportable gal of product

Using the numbers we have determined above, we get:

10 lb (RQ benzene) ÷ **6.3** lb/gal gasoline ÷ **0.05** (wt. % benzene) = **32 gal of gasoline** (reportable if released).

The graph below shows how the reportable quantity of gasoline varies with the weight percent of benzene.



There would be a smaller reportable quantity (the line would shift down) for “heavier” gasoline. Look at all hazardous ingredients to determine which one would “control” the reportable quantity. The controlling ingredient is the one that results in the smallest reportable quantity. For gasoline, the controlling ingredient is benzene.

In real life, this is not an exact science. Use this as a way to come up with educated guesstimates for when to report. For gasoline, report any release that looks like it is approaching 30 gallons or more.

Keep in mind that smaller releases of gasoline are potentially reportable under other regulations (e.g. if the release reaches surface or groundwater). Also remember that **all releases must be cleaned up** to the extent specified in the regulations. This includes releases that are not reportable under any regulation.

In summary: When determining reportable releases, it is important to realize that it is sometimes the ingredients in a given product that make the release of the product reportable. There are three main steps in the process for determining when a release of a product is subject to reporting based on the reportable quantities of the ingredients:

1. Identify the hazardous ingredients, corresponding reportable quantities, and weight percents. This depends on the regulation!
2. If the product is a liquid and the reportable quantity of the ingredient is given in pounds, calculate the weight of the product in pounds per gallon. If the product is a solid, skip this step.
3. Calculate the smallest reportable release using the formula above. If the product is a solid, the formula is simply:

RQ of ingredient (lbs) ÷ weight % of ingredient in solid product = reportable pounds of solid product

6.4 Release Response and Cleanup

Part 201 of PA 451 adopts the following from the Michigan Right to Farm Act, Act 93 of the Public Acts of 1981, MCL 286.471 to 286.474: Fruit, vegetable or field crop residuals that are applied to the land for an agricultural use are not considered a hazardous substance if the use is consistent with generally accepted agricultural management practices. A release does not include fruit, vegetable or field crop processing by-products that are applied to the land for an agricultural use, if the use is consistent with generally accepted agricultural and management practices.

Response and cleanup of a spill or release of hazardous and/or toxic substance can be very costly and detrimental to the health of your employees and environment. To become more efficient and effective in release response and cleanup, make it a priority to integrate pollution prevention planning activities into all aspects of your operations, including the prevention of spills and reduction or minimization of waste during response and cleanup.

In addition to the release reporting requirements described in Section 6.3, you must be ready to immediately respond whenever a release occurs. Whether you are legally required to prepare an environmental release prevention and response plan (described in Section 6.2) or voluntarily decide to prepare one, it needs to be in effect with personnel who are adequately trained to implement it. This helps to ensure that when a release occurs, appropriate response is taken without delay. At least one person trained in release control and cleanup procedures, equipment use, and disposal methods of recovered materials should be on duty or on call at all times. It is important to remember that you are obligated to respond and clean up all contamination, and failure to do so may result in escalated enforcement, including but not limited to the imposition of civil penalties. If your release involves a regulated underground storage tank, see Chapter 4 for information on how to respond and clean up the release. Some excellent Internet resource links for environmental emergency operations and response are the Computer Aided Management of Emergency Operations (CAMEO) web site at **response.restoration.noaa.gov** and the National Institute for Occupational Safety and Health (NIOSH) pocket guide web site at **hazmat.dot.gov/pubs/erg/gydebook.htm**.

All hazardous and/or toxic chemical release responders need to consider the following actions:

Immediately assess the nature of the release; chemicals and exposure pathways of concern; toxicity; safety; type of personal protection equipment (PPE) needed; and take appropriate response and cleanup actions to protect the health and safety of those in the affected area, when and where possible. See Section 6.3 “Release Notification Requirements in Michigan.”

If possible, quickly work to contain the release to prevent the spread of contamination. For example, cover floor drains to prevent the release from reaching the sewer, and dike the release with absorbents such as spill pillows or cat litter and dirt, as necessary to prevent it from spreading. Staff responding to the release must be trained in wearing the appropriate PPE. Most facilities managing hazardous and/or toxic chemicals are required to have an environmental release prevention and response plan in the event of a release. These plans need to be practical, efficient, and provide useful instructions to trained facility personnel that can be easily followed to clean up a release.

Clean up contamination quickly to prevent impacts to human health and the environment. Release prevention planning (i.e., rapid containment, response, and cleanup) may minimize the environmental impacts as well as decrease the overall cost of cleanup. This can be as simple as quickly positioning an absorbent to contain a release to protect a natural resource, or as complex as purging and treating groundwater for years under an approved state remedial action plan or state/federal enforcement order. Waste generated from a cleanup must be properly characterized, managed, and disposed in accordance with applicable state and federal regulations. Most importantly, communicate with the environmental regulatory agencies in your area during the planning phase or in advance of any release. Your RRD district office can provide additional guidance to help assure your response is appropriate and cost-effective.

Some released hazardous or toxic substances and cleanup wastes may pose a serious health threat to personnel. Have appropriate PPE available and personnel trained in its proper use. Depending on the hazardous and/or toxic nature of the release, PPE may include the appropriate chemical resistant suits, gloves, boots, respirators, self-contained breathing apparatus, and eye protection such as goggles or face shields. Material Safety Data Sheets (MSDSs) or the NIOSH Pocket Guide to Chemical Hazards contain valuable information for selecting the appropriate PPE. These resources can be accessed at the following web sites:

- **www.cdc.gov/niosh/homepage.html**
- **www.cdc.gov/niosh/npptl**
- **hazmat.dot.gov/pubs/erg/gydebook.htm**.

Persons responding to hazardous releases must be trained in accordance with the Hazardous Waste Operations and Emergency Response (HAZWOPER) procedures. Another option is to have previously procured professional assistance by looking under the headings “Environmental and Ecological Services,” “Spill Control Service,” or “Waste Reduction, Disposal, and Recycling Service” in the yellow pages of your telephone directory for companies offering environmental cleanup services in your area.

Release planning will help to identify environmental response equipment (e.g., spill cleanup kits, PPE, etc.) specific to a company’s needs to quickly contain and cleanup releases. Many products are used to contain and clean up released chemicals and waste. Absorbent pads, booms, or portable dikes are often used to control, contain, and cleanup large liquid releases. Commercially available absorbent powders and granular clay (like cat litter) are examples of items used to absorb and contain free-phase liquids during release response and cleanup.

If a release cannot be cleaned up by trained personnel, hiring an experienced environmental cleanup contractor is recommended. Depending on the severity of a release, a contractor may provide more efficient and cost effective response and cleanup solutions. Environmental contractors who work on leaking underground storage tank facilities regulated by the DEQ’s

Remediation and Redevelopment Division (RRD) must be knowledgeable of Part 213 (Leaking Underground Storage Tanks) of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended (Act 451). Environmental contractors performing work at leaking or underground storage tank sites must be qualified per Part 215 (Michigan Underground Storage Tank Financial Assurance Act) of Act 451 (Section 324.21542). Your DEQ, RRD district office can verify that your state notification and reporting obligations have been satisfied and that your response and cleanup is being conducted properly. If you need further information or assistance about response and cleanup procedures, please contact your RRD district office (see Appendix C).

6.4.1 Environmental Investigation Requirements

Under Part 201(Environmental Remediation) of Act 451, Section 324.20126, the property is considered a "Facility" or site of environmental contamination if environmental data shows hazardous and/or toxic substances are present on the property at levels that exceed the Part 201 generic residential criteria. A person who owns or operates a "Facility" and who is liable under Part 201 of Act 451, shall do all of the following:

a) Immediately stop or prevent the release at the source.
b) Immediately implement source control or removal measures to remove or contain hazardous substances.
c) Immediately identify and eliminate any threat of fire or explosion or any direct contact hazards;
d) Report the release to the department within 24 hours.
e) Immediately initiate removal of a hazardous substance that is in a liquid phase, that is not dissolved in water.
f) Determine the nature and extent of the release at the facility.
g) Diligently pursue response activities to achieve the cleanup criteria.

If the owner or operator of an environmentally contaminated property is not liable, then he/she may still have certain **Due Care** obligations to address as specified under R 299.51001, et. seq. Due Care protects persons on the contaminated property from exposure to hazardous and toxic substances.

In cases where the release is large or where there have been documented adverse environmental effects (i.e., fish kills, other resource impacts, etc.), a **Natural Resources Damage Assessment** (NRDA) to evaluate and assess natural resource damage(s) and cost(s) may be required. A NRDA is usually difficult and expensive to do. A request from the DEQ for a NRDA may be avoided by either good pollution prevention planning and by responding to releases soon after they occur on a property. If the activity that resulted in a release is regulated under Part 213 (Leaking Underground Storage Tanks), Part 111 (Hazardous Waste Management), or other specific authority, those laws may require other specific requirements for environmental investigations, cleanups, etc. For activities regulated under the aforementioned regulations, contact the DEQ, RRD for Part 213 assistance or WHMD for Part 111 assistance in determining the correct environmental investigation requirements.

An environmental investigation may need to be conducted to define the horizontal and vertical extent of environmental contamination so that appropriate remedial action or cleanup measures can be planned and implemented. This kind of environmental investigation, often referred to as a "**remedial investigation**" or "RI," may include testing of soil, sediment, groundwater, surface

water, and air quality. The key to conducting an effective RI is to gather enough environmental information to make the necessary decisions about further cleanup needs. You will need the services of an experienced environmental professional to carry out a RI.

A RI is a different process than a **Baseline Environmental Assessment** (BEA), which is described in Section 7.3.2. A BEA is a state "liability" protection tool and is not designed to identify cleanup needs. Federal environmental investigation guidance documents may be obtained from the EPA web site at **clu-in.org** and the American Society for Testing and Materials (ASTM) web site at **www.astm.org**. The ASTM guidance includes information about Phase I and II Environmental Assessments (EAs). EAs are commonly performed on parcels of industrial or commercial properties to determine the extent of existing environmental contamination. The ASTM Phase I and II EA processes are often used to determine the environmental condition of a property to be purchased, but much of the ASTM guidance is useful for other site characterization purposes as well.

Information about cleanup requirements, applicable cleanup criteria, establishing "background" concentrations, and other technical issues is available at **www.michigan.gov/deqrrd** (look under Operational Memoranda for Part 201 and Part 213).

6.4.2 Documenting Plans for Cleanup

If you are conducting a cleanup under Part 201 of Act 451, there may be other state/federal regulations to address. A **Remedial Action Plan** (RAP) is used to document how environmental contamination will be cleaned up. If cleanup actions will be conducted in phases, each phase is generally referred to as an **Interim Response** (IR). A series of IRs may go together to become a remedial action. A RAP is intended to comprehensively address all contamination problems at a "Facility," while IRs can be used to address individual releases of hazardous and/or toxic substances or aspects of those releases.

A RAP is generally prepared after a site IR is complete and a course of action can be developed to remediate or cleanup the site as a whole. In many instances, it is appropriate to conduct RAP activities in a phased approach. IR activities allow for time-critical actions to be planned and implemented addressing high-risk contamination areas first, with subsequent IRs to tackle more widespread contamination. Examples of IR activities include removing soil contamination "hot spots," or point sources and abandoned containers containing hazardous substances.

RRD guidance regarding RAPs and IR activities are available at **www.michigan.gov/deqland** (select "Land Cleanup" then "Enforcement & Response Activity").

6.4.3 Cleanup Criteria

The DEQ has adopted a risk-based or generic criteria approach to environmental cleanups. Risk-based cleanup criteria are based on the designated or allowable land-use, because land-use determines what type of site-specific activity and exposure will occur at each property. Cleanup criteria are integral in determining the scope and adequacy of remedial activities.

RRD has calculated "generic" cleanup criteria for soil and water media that apply to the following types of land use categories: residential, commercial, and industrial. Occasionally, the

environmental consultant may find that it is more appropriate to use site specific cleanup criteria to address the contamination. The consultant can develop the site specific variables with oversight from the RRD. If the cleanup is based on site specific variables, then the property deed would have to be restricted. The deed restriction will inform the future property owners about land uses that are prohibited, and about the remaining contamination. DEQ approval is required for a cleanup that depends on land use restrictions. Please contact your RRD district office for assistance in determining which cleanup criteria to apply at your site.

The cleanup criteria are available in Operational Memoranda RRD-1, attachment 1 on RRD's web page at **www.michigan.gov/deqrrd**. Environmental consultants can be found in the online Storage Tank Information Center, Qualified Consultant tab at **www.deq.state.mi.us/sid-web**. For sites located in Michigan's Upper Peninsula, you can refer to Michigan Technological University's Online Environmental Consultant Directory at **emml.mtu.edu/gem/community/consultant/consult_rev.html**. If you need further information or assistance, please contact your RRD district office to determine what cleanup criteria can be used at your site of environmental contamination or call (800) 662-9278 for assistance.

6.4.3.a Ground Cleanup

Even if a release is not large enough to require reporting, it still must be cleaned up, regardless of the release volume or whether it occurred on a paved outdoor surface or dirt surface. Quick response to a release is important since contamination from the release can spread further, making the cleanup more difficult and expensive. Use an inert absorbent material, such as clay-based adsorbents (like cat litter), or specially formulated pads or powders, to soak up the liquid. Collect any released solid materials so they do not spread or get blown around. THE RELEASED MATERIAL SHOULD NEVER BE FLUSHED DOWN THE DRAIN OR ONTO THE GROUND. The act of flushing the release will spread the contamination into previously uncontaminated areas, increase the scope of the investigation, the time needed to cleanup the contamination and exponentially increase the cost of the cleanup.

During the initial response to the spill and the cleanup, be very careful not to mix incompatible or reactive chemicals or wastes together (see Material Safety Data Sheets, or NIOSH at **www2.siri.org/msds/index.php** and **hazmat.dot.gov/pubs/erg/gydebook.htm** for help). The containers used to store spent cleanup materials must be compatible with the released liquid and correctly capped and labeled. Once contained, the used cleanup materials must be disposed of properly based on the hazardous and/or toxic nature of the waste. If the used materials are going to a sanitary landfill, there can be no free-phase liquid present with the containerized materials. If the materials are characterized as hazardous and/or toxic waste, handle the waste in accordance with Chapter 2. For information about hazardous or solid waste characterization, please contact the WHMD at (517) 335-2690 or go to **www.michigan.gov/deqwaste**. For information about transporting requirements for hazardous materials including oils, gas, etc., please refer to the Michigan State Police, Motor Carrier Division web site at **www.michigan.gov/motorcarrier** and Section 4.4.

If a release of hazardous and/or toxic substance occurred to the ground, you must determine if the affected soil is hazardous or solid waste. In either case, it must be properly characterized, removed, transported, treated, stored, or disposed of at the appropriate licensed landfill. If the soil is hazardous waste, you will need to meet the generator requirements discussed in Section 2.4. For small volumes of contaminated soil or waste, the easiest cleanup method is to excavate the soil and place it on visqueen or put it into an acceptable container. The soil, either in the pile or container, must be covered to prevent precipitation from leaching through the soil and spreading

contamination into the ground. Once contaminated soils are properly characterized and approved for disposal by the proper waste facility, it can be disposed of off-site. For larger volumes of contaminated soil, it may be cheaper to either treat the soil in place or dig it up for treatment on-site. There are regulatory restrictions on the movement of contaminated soils on or off property and persons dealing with such materials during cleanup activities at sites of environmental contamination. If you need further information or assistance, please contact your nearest RRD district office (see Appendix C).

The DEQ developed a guidance document entitled, **"Statistics – Sampling Strategies and Statistics Training Materials for Part 201 Cleanup Criteria (S3TM)"** to help verify that soils containing hazardous and/or toxic substances are clean, or below the Part 201 of Act 451 generic residential cleanup criteria. The S3TM guidance has been:

- Applied to excavations to determine the number of samples needed to show that the remaining unexcavated soils are clean.
- Applied to waste piles that have undergone remediation technology.
- Used to characterize and verify that the waste soils have been remediated prior to placing the soils back into the excavation area(s) or landfilling.

If you need further information or assistance, please contact the RRD Project Manager involved with your cleanup to determine whether S3TM can be applied to your environmental cleanup. The S3TM document is available from the DEQ's RRD web site at **www.michigan.gov/deqland** (select "Land Cleanup" then "Site Investigation and Cleanup").

6.4.3.b Groundwater Cleanup

If the groundwater becomes contaminated by a release, overfill, leaking underground storage tank, etc., you are required to clean up the contamination. You may need to hire a qualified environmental professional to complete an hydro geological investigation to determine the specific groundwater remedy needed to cleanup your site. You should discuss all available treatment options and the timeframe for the cleanup with the environmental consultant to ensure that the most appropriate cleanup method is chosen.

Whenever environmental treatment systems are proposed to clean up contamination, the Best Available Technology (BAT) is required for remediation where treated groundwater will be discharged to groundwater or surface water. Best Available Control Technology for Toxics (T-BACT) is required to control the emission of toxic air contaminants. After the application of T-BACT, the emissions of any toxic air contaminants cannot result in maximum ambient concentrations which exceed the applicable health based screening levels. For more information about T-BACT, see Section 1.2.5 "Air Toxics Regulations."

The DEQ encourages the use of innovative environmental treatment technologies or remedies that minimize waste; i.e., electrical power consumption, secondary waste material generation, etc. For pollution prevention information go to **www.michigan.gov/deqp2**.

Permits may be required for air, groundwater, and surface water discharges from a cleanup site. Each permit has requirements for operation, maintenance, monitoring, testing and reporting on the discharge of the treatment system:

- If you use air stripping, you are subject to air quality regulations and may need to obtain a

Permit to Install from the Air Quality Division (AQD) to meet T-BACT requirements prior to discharge. If you need further information or assistance, contact your AQD district office (see Appendix C).

- If treated groundwater is discharged to surface water, you need to obtain a National Pollutant Discharge Elimination System (NPDES) Permit from the Water Bureau (WB) that meets BAT requirements prior to discharge (see Section 3.2.3.a or 3.2.3.c).

- If treated groundwater will be discharged back to the groundwater, you may need to obtain a state groundwater discharge permit, or an exemption prior to discharge (see Section 3.2.4) from the WB. In some areas, the water will not infiltrate or seep back into the ground fast enough to make groundwater discharge a feasible option.

When contaminated groundwater is venting or discharging (i.e., flowing naturally) into surface water, the Part 201 of Act 451 groundwater/surface water interface (GSI) cleanup criteria or screening levels must be met. If the GSI criteria are exceeded, further investigation and possibly remediation of the surface water will likely be required. If groundwater contamination concentrations will exceed the GSI generic cleanup criteria at the point where contaminated groundwater vents to surface water, a more detailed site-specific evaluation will be required to determine if a “mixing zone” can be allowed or whether contaminated groundwater can be allowed to legally discharge into “waters of the state” (i.e., lakes, rivers, creeks, wetlands, drains, etc.) and still ensure protection of human health and the environment. Information about the “mixing zone” evaluation process may be found at **www.michigan.gov/deqland** (select “Land Cleanup” then “Site Investigation and Cleanup”).

The GSI cleanup criteria apply to groundwater sampled from a GSI monitor well, and not to surface water. To view the Part 201 GSI cleanup criteria, go to the web site above.

6.4.3.c Surface Water Cleanup

Cleanup procedures for releases to state waters may be difficult and may vary depending on the uses being made of the receiving waters. State waters are protected for:

1. Public health, safety, or welfare.
2. Domestic, commercial, industrial, agricultural, recreational, or other uses being made of the water.
3. The value of the riparian land.
4. Livestock, wild animals, birds, fish aquatic life, or plants and the value of fish and game.

A discharge to water that causes impairment to any of the above is a violation of Section 3109 of Part 31 (Water Resources Protection) of Act 451; it is also a violation of the facility's NPDES permits, which have specific reporting requirements for these releases. Of these water uses, major public health concerns exist for releases to surface water that can threaten downstream recreational beaches or surface water drinking water supply intake systems.

The DEQ’s WB requires that all appropriate and reasonable steps be taken to clean up and prevent further pollution in consideration of existing conditions of state waters. Remember in the event of a release to state waters, including releases to public storm sewers and drains, immediately contact:

- Your **WB district office** (see Appendix C) or the Pollution Emergency Alerting System

(PEAS) hotline at (800) 292-4706 (in state) or (517) 373-7660 (out-of-state). Also review your facility's NPDES permits to assure that the contact is followed up with required written notification.

- Your primary public answering service, or 911.

Release response is chemical, location, and action specific. Some hazardous substances are water-soluble and mix immediately with the surface water. When water-soluble substances are released, a reasonable course of action may require large quantities of contaminated water to be captured, removed, contained, and properly treated and/or disposed. Large releases requiring the use of floating booms, skimmers, storm sewer plugs, etc. will likely require a release response contractor, whereas small releases may travel downstream before any response can contain them. The longer the released substance remains in the water, even if contained by booms, the more contamination diffuses or mixes with the surface water, which may result in increased environmental harm and liability. Therefore, release prevention instead of cleanup can yield tremendous cost savings.

Release prevention includes having a response plan in place, with trained responders and equipment easily available, for immediate containment of any release. Some generic release response equipment to keep on-site may include: absorbent booms and pads, thick plastic bags, sand bags, cat litter, portable emergency pumping and containment equipment, protective clothing, and safety gear suitable for on-site materials and hazardous chemical exposure conditions. It is also recommended that you know the route of your storm sewer system and appropriate areas (such as the last storm water catch basin on your site) to catch and contain releases. Talk with an environmental response consultant or the DEQ WB about which containment and cleanup methods may be best for your business. To research environmental innovative remediation technology options, go to **www.epa.gov/tio/reachit.html**.

When contaminated groundwater is venting or discharging (i.e., flowing naturally) into surface waters, the Part 201 of Act 451 GSI Cleanup Criteria must be applied (see Section 6.4.3.b - Groundwater Cleanup).

6.4.3.d PCB CleanUp

Polychlorinated biphenyls (PCBs) are **hazardous substances- Part 201** that must be addressed under the federal and/or state corrective or remedial action process and, in some cases, in coordination with the EPA Region 5. Part 201 of Act 451 Cleanup Criteria have been developed for PCBs on the basis of media (i.e., air, soil or water)-exposure pathway, land-use-specific, and must be applied for corrective action, pursuant to R 299.9629 of Part 111 (Hazardous Waste Management) of Act 451. However, to address exposures via the soil direct-contact pathway, the applicability of the Toxic Substances Control Act (TSCA), at 40 CFR 761 must be determined and applied appropriately (see Part 201 of Act 451 Cleanup Criteria tables, footnote [T]). The Part 201 of Act 451 Cleanup Criteria can be found at **www.michigan.gov/deqland** (select “Land Cleanup,” then “Site Investigation and Cleanup”). If TSCA is determined to apply to an area with PCB contamination, all TSCA obligations must be addressed in coordination with EPA Region 5. A state Remedial Action Plan cannot be considered complete without a demonstration of compliance with all TSCA obligations. If you need further information or assistance, please contact Ms. Amy Merricle of the RRD at (517) 241-3584 or merricla@michigan.gov.

WHERE TO GO FOR HELP

SUBJECT: **SARA Title III requirements for Hazardous Chemical Release Reporting, Toxic Chemical Release Inventory, and Emergency Planning Notification**

CONTACT: DEQ, Michigan SARA Title III Program
(517) 373-8481
deq-ead-sara@michigan.gov
www.michigan.gov/deqsara
www.michigan.gov/deqrelease
www.michigan.gov/deqemergencyplan

PUBLICATIONS:
1. Michigan Facilities' Guide to SARA Title III, Emergency Planning and Release Reporting
2. Release Notification Requirements in Michigan - Table

SUBJECT: **Environmental investigation guidance, Remedial Action Plans (RAP), site cleanup requirements, and release reporting**

CONTACT: DEQ, Remediation and Redevelopment Division (RRD)
(517) 373-9837
www.michigan.gov/deqrrd

PUBLICATIONS:
1. RRD Operational Memorandum #17
2. Notice of Migration of Contamination (EQP 4482)
3. Notice Regarding Discarded or Abandoned Containers (EQP 4476)
4. Spill or Release Report (EQP 3465)

SUBJECT: **Pollution Incident Prevention Plans (PIPP)**

CONTACT: DEQ, Water Bureau District Office

PUBLICATIONS:
1. PIPP and Part 5 Rules Informational Packet
2. Salt and Brine Storage Guidance for Road Agency Maintenance and Other Facilities

---

SUBJECT: **Hazardous/non-hazardous waste characterization and disposal information**

CONTACT: DEQ, Waste and Hazardous Materials Division, District Office
See Appendix C for phone numbers
www.michigan.gov/deqwaste (select "Hazardous and Liquid Industrial Waste" then "Hazardous and Liquid Industrial Waste Management")

PUBLICATIONS:
1. Hazardous Waste Emergency Information (EQP 3472) (posting for

Small Quantity Generators)
2. Contingency Plan and Emergency Procedures (for Large Quantity Generators)
3. Personnel Training Requirements for Fully Regulated Generators of Hazardous Waste

---

SUBJECT: **Releases from oil and gas production fields**

CONTACT: DEQ, Geological and Land Management Division (GLMD)
(517) 241-1515
www.michigan.gov/deqglmd

PUBLICATIONS: 1. Report of Loss or Spill (EQP 7233)

SUBJECT: **Risk Management Plans**

CONTACT: DEQ, Environmental Science and Services Division, Clean Air Assistance Program
(800) 662-9278
www.michigan.gov/deqemergencyplan

SUBJECT: **Storm water pollution prevention plans (SWPPP) and surface water cleanup**

CONTACT: DEQ, Water Bureau
(517) 373-1949
www.michigan.gov/deqemergencyplan

PUBLICATIONS: 1. SWPPP Sample Plans

SUBJECT: **Report of dischage of untreated sewage**

CONTACT: DEQ, Water Bureau, District Office
See Appendix C for phone numbers
www.michigan.gov/deqrelease

PUBLICATIONS: 1. Report of Dischages of Untreated or Partially Treated Sewage (EQP 5857)

SUBJECT: **Releases from leaking underground storage tanks**

CONTACT: DEQ, Remediation and Redevelopment Division (RRD)
(517) 335-4958
www.deq.state.mi.us/sid-web

PUBLICATIONS: All the forms listed in Section 6.4 can be found in the above webpage by selecting the 'Forms and Documents' tab.

SUBJECT: **Emergency response planning**

CONTACT: Michigan State Police, Emergency Management and Homeland Security Division
(517) 333-2749
www.michigan.gov/emhsd

PUBLICATIONS:
1. Site Emergency Planning Workbook
2. Critical Incident Protocol — A Public and Private Partnership

---

SUBJECT: **Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements**

CONTACT: Department of Labor and Economic Growth, Michigan Occupational Safety and Health Administration (MIOSHA)
(517) 322-1608
www.michigan.gov/miosha

SUBJECT: **Federal environmental investigation guidance**

CONTACT: U.S. Environmental Protection Agency (EPA)
http://clu-in.org

SUBJECT: **Oil spill planning and response and Spill Prevention, Control, and Countermeasures (SPCC) Plans**

CONTACT: EPA, Office of Solid Waste and Emergency Response (OSWER)
(312) 353-8200
www.epa.gov/oilspill/index.htm

SUBJECT: **Release of hazardous materials during transportation**

CONTACT: U.S. Department of Transportation
(800) 467-4922
hazmat.dot.gov

PUBLICATIONS:

1. Department of Transportation Hazardous Materials Incident Report (DOT F5800.1)
2. Incident Report - Gas Distribution System (RSPA F 7100.1)
3. Incident Report - Gas Transmission and Gathering Systems (RSPA F 7100.2)
4. Accident Report - Hazardous Liquid Pipeline Systems (DOT Form 7000-1)

SUBJECT: **Risk Management Plans**

CONTACT: EPA, Chemical Emergency Preparedness and Prevention Office
(800) 424-9346 (RCRA, Superfund, and EPCRA Hotline)
www.epa.gov/swercepp

SUBJECT: **Chemical abstract information**
www.chemfinder.com

SUBJECT: **Federal environmental investigation guidance including information about Phase I and II environmental site assessments (ESAs)**

CONTACT: American Society for Testing and Materials (ASTM)
www.astm.org

SUBJECT: **Material Safety Data Sheets (MSDS)**
www.reade.com/MSDS_Links.html

APPENDIX 6-A: SUMMARY OF COMMON ENVIRONMENTAL RELEASE PREVENTION AND RESPONSE PLANS

	Hazardous Waste Contingency Plan For Generators	PIPP[1]	SPCC[2]	SWPPP[3]	EAP[4]	RMP[5]
	See Section 6.2.1	See Section 6.2.2	See Section 6.2.3	See Section 6.2.4	See Section 6.2.6	See Section 6.2.5
Regulated Substance or Activity	**Hazardous waste-DEQ**	**Salt** and **Polluting Materials** listed in R 324.2009 See SPCC for oils	**Oil-EPA** (PCBs see 6.2.3)	Companies with a storm water discharge permit	Flammable and combustible liquids	Substances listed in **Section 112(r)** of CAA[5]
Regulation	◆ 40 CFR 265.50-.56 ◆ Part 111 of Act 451[6] ◆ R 299.9306 (generators)	◆ Part 31 of Act 451 ◆ R 324.2001- 2009	◆ 40 CFR 112	◆ 40 CFR 122-124 ◆ Part 31 of Act 451 ◆ R 323.2161	• FL/CL Rules R 29.5201 - 29.5255 and adopted NFPA pamphlet number 30 2000 edition Chapter 5, Section 5.12	◆ Sec.tion 112(r) of CAA ◆ 40 CFR 68 (requirements vary depending on the program the company is subject to).
Administering Agency	◆ DEQ, WHMD[7]	◆ DEQ, WB[8]	◆ EPA, Oil Planning & Response Section	◆ DEQ, WB	DEQ, WHMD	◆ EPA
Who Must Prepare	Large quantity generators (LQG) of hazardous waste must submit a written plan. Small Quantity generators (SQG) are to post information (see 6.2.1). Hazardous waste transporters and treatment, storage, & disposal facilities have other planning requirements.	◆ Companies with **salt** or other **polluting materials** that meet or exceed threshold planning quantities & don't meet listed exemptions. ◆ When DEQ deems necessary (see 6.2.2).	If a release could potentially reach navigable waters or shorelines and facility has capacity storage of oil that: ◆ exceeds 1,320 gal. for all above ground storage, or ◆ exceeds 42,000 gal. for UST.[9]	If your company is required to have a storm water discharge permit (see Section 3.2.3.d).	Companies that have flammable and combustible liquids that are not exempted	If your facility has a substance identified in **Section 112(r)** of the CAA at or above a specific threshold quantity. Listed substances are located on the "**List of Lists**" (see Section 6.2.5).

MIOSHA also has regulations.

[1]PIPP – Pollution Incident Prevention Plan
[2]SPCC – Spill Prevention, Control, and Countermeasures Plan
[3]SWPPP – Storm Water Pollution Prevention Plan
[4]EAP – Emergency Action Plan
[5]RMP – Risk Management Plan

[5]CAA – The Clean Air Act
[6]Act 451 – Public Act 451 of 1994, as amended
[7]WHMD – Waste and Hazardous Materials Division
[8]WB – Water Bureau
[9]UST – underground storage tank
[10]LQG – Large Quantity Generator
[11]SQG – Small Quantity Generator

APPENDIX 6-A (continued)

	Hazardous Waste Contingency Plan For Generators	PIPP[1]	SPCC[2]	SWPPP[3]	EAP[4]	RMP[5]
Date Plan is Required	When you reach an applicable generator category.	By August 31, 2003 or if after this date, when meet or exceed threshold planning quantities.	See Section 6.2.3	First time Storm Water Discharge Permit applicants must have SWPPP before submitting "Notice of Intent."	When have regulated materials on-site	◆ Date when regulated substance exceeds threshold quantity, or ◆ Within 3 years after substance added to list in 40 CFR 68.130.
Submit Copy of Plan To	LQG[10] must submit copies to: ◆ Local fire departments ◆ Police departments ◆ Hospitals ◆ Local emergency response teams ◆ Contracted emergency providers and ◆ Keep copy on-site SQG[11] either submit diagrams or discuss response plan with response entities and post by the telephone.	Submit notification of plan completion to: ◆ Local emergency planning committee ◆ Local health department ◆ DEQ, WB along with certification that company is compliance with Part 5 rules ◆ Keep copy on-site	◆ Keep copy on site	Submit notification of plan completion to: ◆ DEQ, WB ◆ Keep copy on-site	◆ Keep copy on-site	◆ EPA, RMP reporting center ◆ Local emergency response agencies ◆ Keep copy on-site
Signed By			Certified professional engineer	◆ Owner, operator, permittee, or authorized agent ◆ Certified storm water operator		◆ Owner, operator, permittee, or authorized agent
Mandatory Review Period (other than when regulations are revised)	◆ If plan fails ◆ If changes to emergency equipment or coordinator ◆ If changes in facility design, construction, operation, etc.	◆ 3 years ◆ When release occurs or changes in planning information.	◆ 5 Years ◆ Whenever release or changes at facility occurs.	◆ Annual ◆ Whenever release or changes at facility occurs.	◆ When release occurs ◆ When hazards may change. For example changes in: • Materials • Process equipment • Process controls • Operating procedures or assignments	◆ 5 Years ◆ Within 6 months whenever a release or change occurs at facility.

APPENDIX 6-A (continued)

	Hazardous Waste Contingency Plan For Generators	PIPP[1]	SPCC[2]	SWPPP[3]	EAP[4]	RMP[5]
Main Contents of Plan:						
Emergency Coordinator & Alternate	X	X	X	X	x	X
Site Map / Diagram of Facility	X	X	X	X		X
Evacuation Routes	X	Recommended			X	Recommended
Emergency Equipment Listing (inspections/testing/maintenance programs)	X	X	X	X	X	X
Description of Response Actions (including notification procedures)	X	X	X	X	X	X
List of Past Releases (history period)			(1 year) Recommended	(3 years)		(5 years)
Pollution Prevention Methods (including equipment)		X	X	X		Recommended
List of Regulated Materials On-site		X	X	X		X
Employee Training Program Description	X	Consider	X	X	(Include Drills)	X